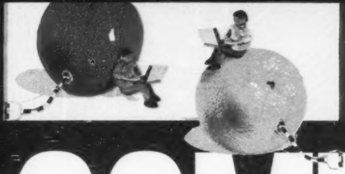
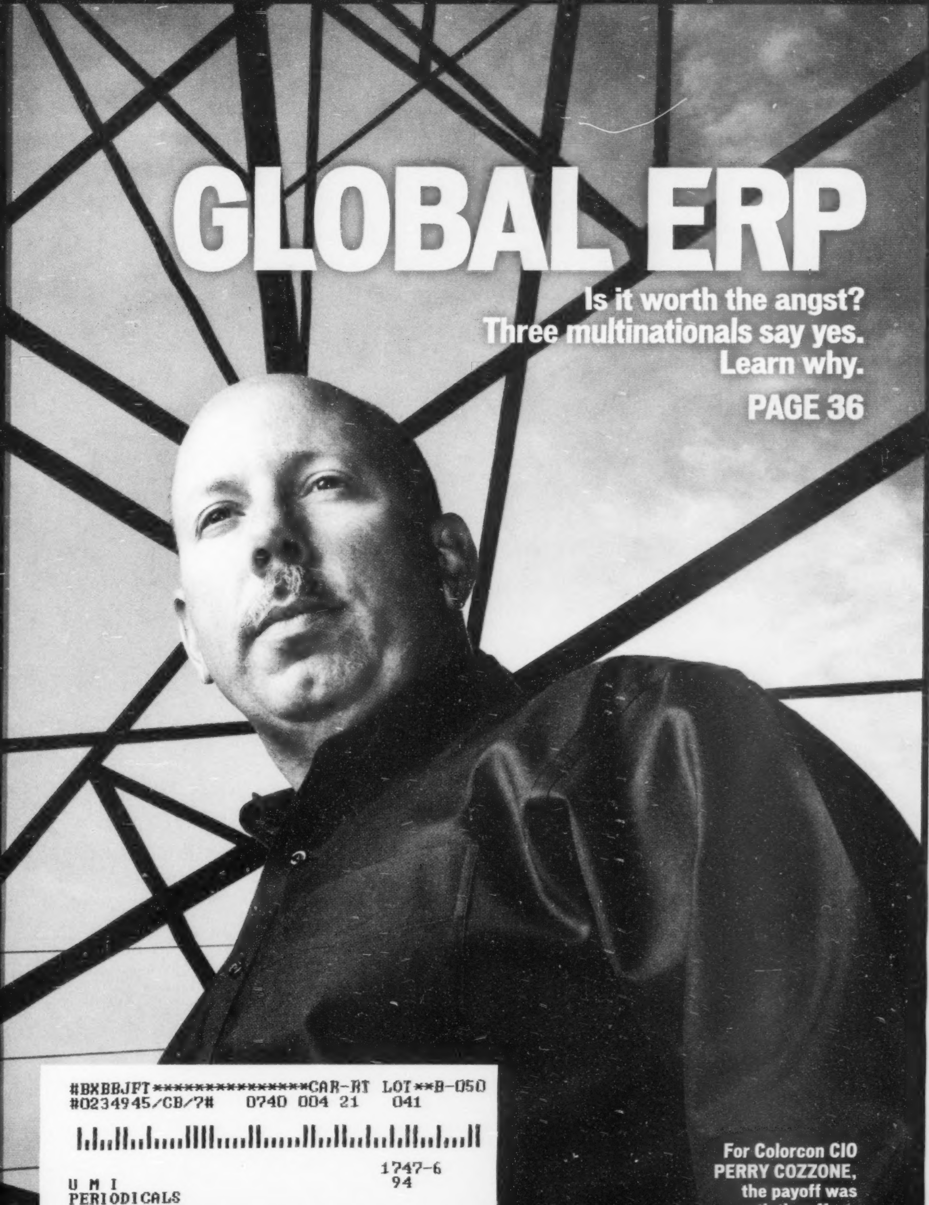


Managing Apples and Oranges: Here's the scoop on software tools that can help you juggle Macs and PCs. PAGE 40

COMPUTERWORLD®



GLOBAL ERP

Is it worth the angst?
Three multinationals say yes.
Learn why.
PAGE 36

For Colorcon CIO PERRY COZZONE, the payoff was worth the effort.

#BXBBJFT***************CAR-RT LOT**B-050
#0234945/CB/7# 0740 004 21 041
1747-6
94
U M I
PERIODICALS
PO BOX 1346
ANN ARBOR MI 48106-1346

Inside

OCTOBER 15, 2007
VOL. 41, NO. 42 $5/COPY

News Analysis

Retailers ask credit card companies to take more responsibility for storing payment card data. PAGE 22

Privacy concerns among employees and lawmakers continue to dog IT efforts to expand use of RFID technology. PAGE 26

The Grill: Michael McRobbie describes his rise from CIO to president of Indiana University. PAGE 30

Opinions

John Halamka warms up to flextime and telecommuting for IT staffers. PAGE 34

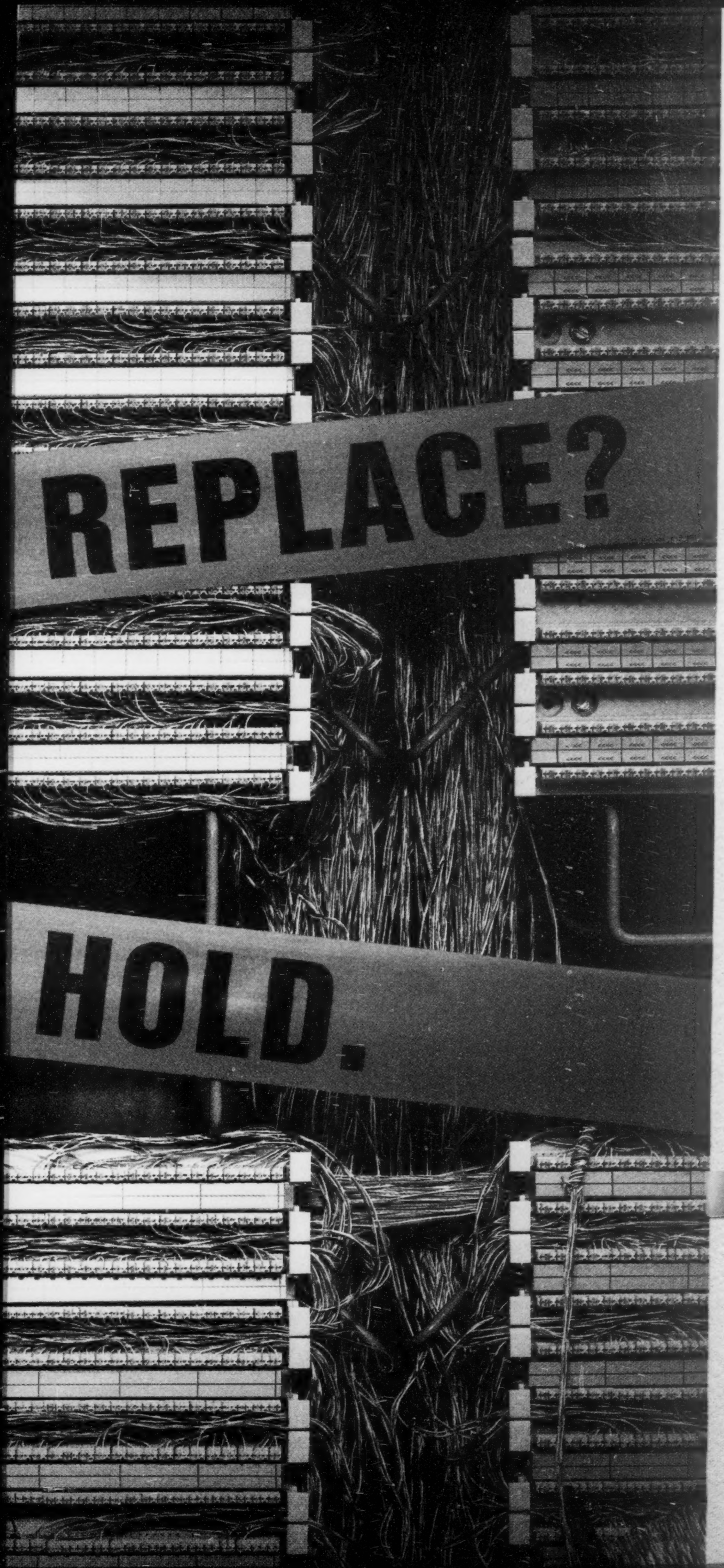
Careers

A CIO offers advice to someone who's entering the IT field late. PAGE 64

Don't Miss

How IT managers can wield more influence in the workplace. PAGE 50

ABOUT TO RIP &
PLEASE



Change without changing it all.

While the world is telling you to move to VoIP in rather disruptive ways, we'd like to pause and propose a better way. Because it's not about getting all new hardware.

It's about getting new software.

Now you can keep your hardware—your PBX, your gateways, even your phones. Simply move to VoIP with software. Software that integrates with Active Directory,® Microsoft® Office, Microsoft Exchange Server, and your PBX.

Maximize your current PBX investment and make it part of your new software-based VoIP solution from Microsoft. Big change is just a software install away. Learn more at microsoft.com/voip

VoIP AS YOU ARE.

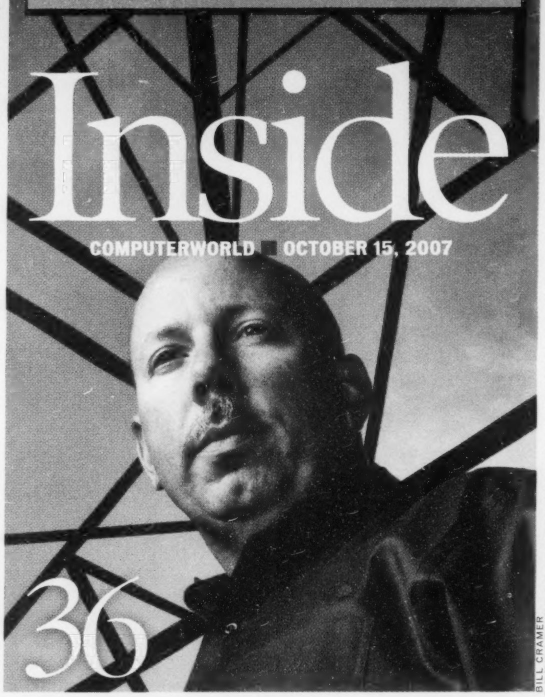
Your potential. Our passion.®

Microsoft®

BREAKING NEWS AT COMPUTERWORLD.COM

Inside

COMPUTERWORLD ■ OCTOBER 15, 2007



BILL CRAMER

■ NEWS DIGEST

16 IT executives find new ways to get staffers to understand the needs of **business people**. | **Hackers hit** a system holding data on 3,000 customers at a Midwestern bank.

18 Some customers fear that **SAP's acquisition of Business Objects** may lead to dwindling support. | An **Ohio official** loses a week of vacation for failing to prevent a June **data theft**.

20 Incoming **SIM President** Robert Keefe says CIOs face problems hiring at all levels.

■ NEWS ANALYSIS

22 Retailers Take Swipe at PCI Security Rules. The National Retail Federation has called on credit card companies to stop forcing retailers to store payment card data.

26 Privacy Concerns Dog IT Efforts to Implement RFID. Corporate efforts to use RFID continue to stir up concerns about privacy and prompt state legislators to propose laws restricting its use.

■ OPINION

8 Editor's Note: **Don Tennant** takes readers behind the scenes to explain why two reader comments were removed from a story on *Computerworld*'s Web site.

34 John D. Halamka is reconsidering whether close physical proximity is still the key to productivity.

60 Bart Perkins says that the latest version of ITIL finally gives IT groups standards, definitions and processes they can sink their teeth into.

68 Frankly Speaking: **Frank Hayes** says gadget tech isn't all there is to the future of IT, but it's a pretty good place to start.

■ FEATURES

36 Global ERP: Is It Worth the Angst?

COVER STORY:

For three multinationals, consolidating regional ERP systems into a single global instance was fraught with challenges. Colorcon CIO Perry Cozzone (above) and other IT leaders explain how they beat the odds and reaped the benefits.

40 Managing Apples And Oranges

Here's the scoop on software tools intended to help you juggle Macs and PCs.

46 Premier 100 Closeup: Systems in Concert

Trans World Entertainment's IT team had just 30 days to integrate 335 Musicland stores with its back-end systems. Here's how they did it.

50 How to Influence Anyone

In IT, influencing those over whom you have no authority is the key to success. IT Mentor David Maxfield has a strategy that can't miss.

54 Virtualization 101

Virtualization can reduce spending on new server and storage hardware, increase application uptime and simplify IT management. These four steps will help you get it right the first time.

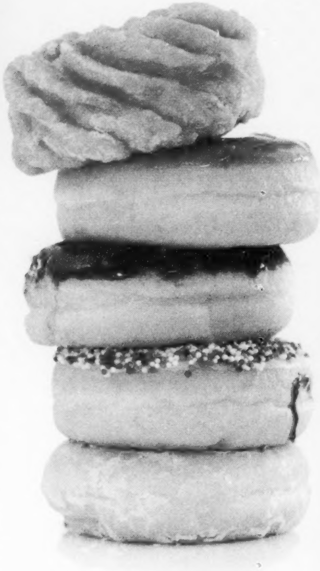
COVER: PHOTO BY BILL CRAMER

■ DEPARTMENTS

28 On the Mark: **Mark Hall** reports that Weather.com has trashed its customer-facing proprietary apps and moved to open source.

30 The Grill: Indiana University President Michael McRobbie talks about moving up from CIO, balancing open source and Microsoft, and enabling innovation.

58 Security Manager's Journal: **If Ever We Step Into the Breach.** A federal regulation has a snowball effect, requiring C.J. Kelly's agency to change several procedures and contracts.



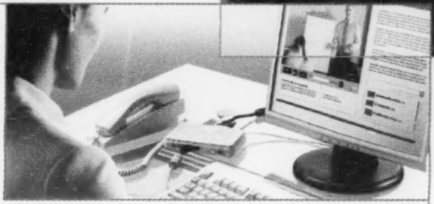
64 Career Watch: **Mmmm . . . doughnuts.** Or not. Why indulging in sweet, deep-fried breakfast treats could cost you more than a few extra pounds. Plus, *Computerworld* Premier 100 IT leader Gregory Smith has advice on getting started late in the IT field.

66 Shark Tank: When the CIO urges his staff to remain focused while offshore outsourcing options are considered, chances are the focus will be on résumé-polishing.

■ ALSO IN THIS ISSUE

Letters	**10**
Online Chatter	**12**
Company Index	**66**

NEC Next-Generation Thin Client Solutions



Our new innovation is so advanced, it's virtual.

The most valuable assets of your business will now be more secure, thanks to the next-generation Virtual PC Center from NEC, a global IT and networking leader. Our new virtual PC thin client system is designed to enhance PC data security, reduce total cost of ownership, increase user flexibility and simplify IT management - all while delivering multimedia support. NEC. **Empowering you through innovation.**

www.necus.com/vpcc

IT SERVICES AND SOFTWARE **ENTERPRISE NETWORKING AND COMPUTING** SEMICONDUCTORS **IMAGING AND DISPLAYS**

©NEC Corporation 2007. NEC and the NEC logo are registered trademarks of NEC Corporation.
Empowered by Innovation is a trademark of NEC Corporation.

Empowered by Innovation NEC

Technology Consulting from Accenture.

Our work with businesses and governments around the world reveals a clear pattern: high performers set themselves apart by positioning information technology as a strategic asset and a partner to the enterprise. Findings from our comprehensive ongoing research confirm that pattern.

Accenture Technology Consulting helps bridge the gap between an organization's existing IT capabilities and its vision for high performance. We draw upon extensive resources and experience to enable our clients to achieve their goals:

- Aligning IT strategy with business value
- Building an enterprise architecture "blueprint"
- Improving service levels between IT and the business
- Standardization, consolidation and virtualization of IT infrastructure
- Consolidation and transformation of networks
- Maximizing workplace technologies and collaboration tools
- Improving security across IT infrastructure and applications
- Renewing legacy applications to achieve greater flexibility and performance
- Improving IT processes
- Engineering performance into system and application development life cycles

To learn more about Accenture Technology Consulting, visit accenture.com/technology

© 2007 Accenture. All rights reserved.

Are you investing in IT?
Or just spending on IT?

How you perceive your IT investments may well determine what you get out of them. While some focus on the outlay, the highest-performing businesses focus on the return. They use their IT investments to drive innovation, productivity and growth. To see how Accenture Technology Consulting can help you do the same, visit accenture.com/technology

• Consulting • Technology • Outsourcing

accenture
High performance. Delivered.

COMPUTERWORLD.COM

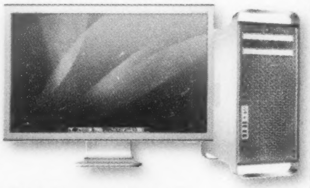
This Week Online

Data Centers in Strange Places

Would you house a data center in a diamond mine, a former Air Force base or an old chapel? These organizations did, with great success. computerworld.com/servers

DOS Lives! Secrets of the Windows Command Prompt

Don't be afraid of a little typing. Lots of good old DOS commands still work in Windows, and often they're the best choice for quick and efficient work. computerworld.com/software



10 Things That Should Be in Apple's Next Mac Pro

Amid reports that Apple may be hoarding Intel Penryn chips to use in its next Mac Pro, Seth Weintraub offers a wish list of technologies he'd like to see in Apple's professional desktop line. computerworld.com/mac

Mac E-mail Showdown: Which Program Delivers?

Our reviewer weighs the pros and cons of Mail, Entourage and Thunderbird to see which one gets his thumbs-up. computerworld.com/mac

Windows XP SP3 to Include Some Vista Features

One of the Vista features that will appear in the next XP update is Network Access Protection, which is policy-enforcement technology that inspects client PCs before they access a corporate network. The machines are then blocked if needed. computerworld.com/software

Amazon Offers Uptime Guarantees for Online Storage

Amazon.com has unveiled a new service-level agreement that guarantees that its S3 online storage service will be available for 99.9% of requests. computerworld.com/storage

Blog Watch

Electronic Arts Sells Its Soul

When someone buys a game, he expects entertainment. In SimCity Societies, what he'll get is an energy company pushing a thinly veiled agenda. Blogger Preston Gralla decries this union. computerworld.com/blogs/node/6346

Not-So-Green Computing

Previous studies have shown that home PC energy consumption has skyrocketed. Robert Mitchell suggests that the fault may not just be with the hardware. Could an entire operating system such as Windows be an energy hog? computerworld.com/blogs/node/6283

SHARKBAIT BETA

Bosses Come First

When the help desk has a dozen computers to set up in short order, the boss goes out of his way to ensure his computer is first. Little does he know the consequences of his deceit . . . http://sharkbait.computerworld.com/?q=node/1713

ONLINE DEPARTMENTS

Breaking News	computerworld.com/news
Newsletter Subscriptions	computerworld.com/newsletters
Knowledge Centers	computerworld.com/topics
The Online Store	computerworld.com/store

DO YOU NEED A BETTER
WAY TO SECURE YOUR DATA?

ENCRYPT YOUR DATA WITH THE NEW LTO ULTRIUM GENERATION 4 TECHNOLOGY.

LTO ULTRIUM 4 TECHNOLOGY CAN PROVIDE TAPE DRIVE LEVEL ENCRYPTION TO HELP PROTECT YOUR SENSITIVE INFORMATION. AND, WITH TAPE CARTRIDGE CAPACITIES UP TO 1.6 TB* AND TAPE DRIVE SPEEDS UP TO 240MB* PER SECOND, LTO-4 TECHNOLOGY CAN HELP YOU REDUCE STORAGE COSTS WHILE ADDRESSING DATA SECURITY.

ULTRIUM LTO 4

The Ultimate Tape Format.

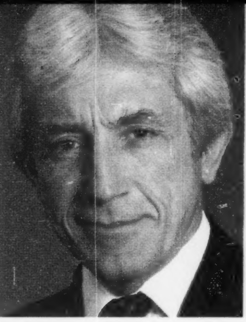
HELPING TO REDUCE STORAGE COSTS AND PROTECT DATA!

For more information about LTO Ultrium 4 Technology visit: www.trustlto.com

*ASSUMES 2:1 COMPRESSED DATA. LINEAR TAPE-OPEN, THE LTO LOGO, ULTRIUM, AND THE ULTRIUM LOGO ARE TRADEMARKS OF HP, IBM AND QUANTUM IN THE US AND OTHER COUNTRIES.

■ EDITOR'S NOTE

Don Tennant



Under the Covers

THERE WAS an intriguing article posted on our Web site last week about unusual locations for data centers, including buildings that formerly were places of worship. Titled "Data Centers Get Religion," the story by Barbara Darrow cited the example of St. Clement's chapel at Boston College, which prior to last year had been empty but now houses the university's data center. The story created a bit of a stir.

We found it necessary to remove the first two reader comments in response to the story, a move that drew this entry from the anonymous author of the first comment (edited here for clarity; the actual posting is viewable on the site):

"Barbara, I am ashamed to say that you deleted my post. That is not nice. Since when is discriminating against religious posts right? I will see that *Computerworld* is off my reading list. All I said was it was sad that a university started by Christians was being secularized. Turning a chapel into a computer center is NOT a good thing, it's very sad. Where is your faith? God has not changed, people have."

If that's all the reader said, why did we remove his comment? Well, the truth is, that's not all he said. This is what he actually wrote in his posting:

"Too bad the church could not be restored for its original use — to worship God and Jesus Christ, the Son of God. Only goes to [show] what's happening to our faith-based universities and colleges started by Christians. Where is your faith, young people? God has not changed, but you have. I pray for you that you might have a personal relationship with Jesus Christ!"

The other comment we removed was a response from another anonymous reader to that posting:

"If you believe human actions are predetermined by God, then you should accept that He provided the wisdom to create computers, and now provides BC the place to house servers. He alone understands the dangers of overheating, saving us all from server hell."

It's important to note that the authors of our stories don't have the authority to remove reader comments; only certain editors are given that responsibility. In this case, as she noted in a posting in response to the first reader, blogs and projects editor Joyce Carpenter removed the two comments "because they were off-topic. They did not have a clear connection to the article."

■ Now you've seen under the covers and you know exactly what we removed. Did we make the right call?

Being off-topic is one of several grounds for removal, according to the comments policy posted on our site. Others include making potentially libelous statements, using obscene or racist language, engaging in personal attacks, publishing private information without consent, plagiarizing, and engaging in commercial promotion.

So now you've seen under the covers and you know exactly what we removed. Did we make the right call?

I'm raising the question in this case because I don't ordinarily have that luxury. In the event of a personal attack or an obscene or racist comment, for example, I'd obviously be unable to show you exactly what we removed.

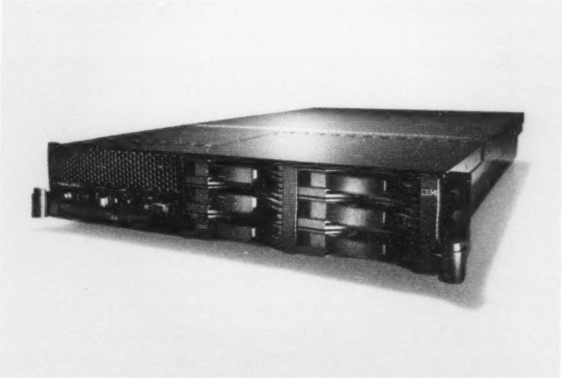
It's a particularly interesting case, because it involves an especially emotional issue: religion. The first reader went off topic when he engaged in proselytizing. It's one thing to express the view that former places of worship should not be converted into data centers, but it's quite another for someone to use the forum to suggest that others should adopt his religious conviction. The second reader was off-topic because he used the forum to mock that conviction.

I'm comfortable that those were indeed sufficient grounds to remove the comments, based on generally accepted guidelines for monitoring the acceptability of reader-generated content in this type of online discussion forum. No one is arguing that the readers don't have the right to express those views. The question is whether allowing them to be expressed in this forum serves the interests of our readership.

My feeling is it does not. But I'm eager to hear what you have to say, and I'll revisit the question to share your feedback. Did we get this one right? ■

Don Tennant *is editor in chief of* Computerworld. *Contact him at don_tennant@computerworld.com.*

THE I.T. MANAGER'S I.T. MANAGER.



IBM System x3655 Express

$1,999 (Save $655)

OR $53/ MONTH[1]

Whatever your everyday routine is like, IBM System x3655 Express can help manage routine tasks and save you time. How? It comes with IBM Director, which helps to deploy, monitor, troubleshoot, maintain *and optimize your infrastructure from a single screen.* It's simple and efficient.

From the people and Business Partners of IBM: **Innovation made easy.**

ADVANCED SYSTEMS MANAGEMENT THAT HELPS SAVE YOU TIME AND MONEY.

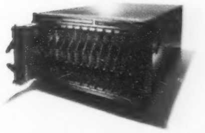
PN: 7985EBU

- Featuring up to two AMD Dual-Core Opteron™ 2000 Series Processors
- Increased performance-per-watt efficiency with dual-core processing
- IBM Director allows you to manage anywhere from 5 to 5,000 other servers
- Xcelerated Memory Technology means faster access to memory for large memory configurations
- Comes with a 1-year on-site limited warranty[2] on parts and labor

IBM BladeCenter LS21 EXPRESS

PN: 7971E1U

- Featuring up to two AMD Dual-Core Opteron™ 2000 Series Processors
- Up to 32GB of DDR II memory to maximize the amount of memory that can be installed in the ultra-dense blade
- IBM Director allows you to manage servers remotely to help increase uptime and reduce costs
- Integrated SAS controller and connectors for 2.5-inch SFF non-hot-swap SAS HDDs



$3,769

OR $100/ MONTH[1]

(Save $248)

AMD 64 Opteron™

Special offers from IBM Express Servers:

Check out our latest offers. (And they really are our latest offers.) All are designed to help you save money and get the most from your IT investment. Visit our Web site for more details.

IBM® **express advantage™**

ibm.com/systems/itmanager

1 866-872-3902 (mention 6N7AH42A)

1. IBM Global Financing offerings are provided through IBM Credit LLC in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government customers. Monthly payments provided are for planning purposes only and may vary based on your credit and other factors. Lease offer provided is based on an FMV lease of 36 monthly payments. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice. 2. IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply. For a copy of applicable product warranties, visit ibm.com/servers/support/machine_warranties or write to: Warranty Information, P.O. Box 12195, RTP, NC 27709, Attn: Dept. JDJA/B203. IBM makes no representation or warranty regarding third-party products or services, including those designated as ServerProven® or ClusterProven.® Telephone support may be subject to additional charges. For on-site labor, IBM will attempt to diagnose and resolve the problem remotely before sending a technician. On-site warranty is available only for selected components. Optional same-day service response is available on select systems at an additional charge. IBM, the IBM logo, IBM Express Advantage, System x and BladeCenter are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. For a complete list of IBM trademarks, see ibm.com/legal/copytrade.shtml. AMD, the AMD logo, AMD Opteron and AMD PowerNow! are trademarks of Advanced Micro Devices, Inc. All prices are IBM's estimated retail selling prices as of August 1, 2007. Prices may vary according to configuration. Resellers set their own prices, so reseller prices to end users may vary. Products are subject to availability. This document was developed for offerings in the United States. IBM may not offer the products, features, or services discussed in this document in other countries. Prices are subject to change without notice. Starting price may not include a hard drive, operating system or other features. Contact your IBM representative or IBM Business Partner for the most current pricing in your geographic area. © 2007 IBM Corporation. All rights reserved.

COMPUTERWORLD

P.O. Box 9171, 1 Speen Street
Framingham, MA 01701
(508) 879-0700
Computerworld.com

■ **EDITORIAL**
Editor in Chief Don Tennant
Executive Editors Mitch Betts, Julia King (events)
Features Editors Kathleen Melymuka, Ellen Fanning (special reports)
Managing Editor/Production Michele Lee DeFilippo
Assistant Managing Editor/Production Bob Rawson
Design Director Stephanie Faucher
National Correspondents Gary Anthes, Thomas Hoffman, Julia King, Robert L. Mitchell
Editor at Large Mark Hall
Senior News Columnist Frank Hayes
Art Director April O'Connor
Associate Art Director Owen Edwards
Research Manager Mari Keefe
Senior Copy Editors Eugene Demaitre, Monica Sambataro
Copy Editor Donna Sussman
Office Manager Linda Gorgone
Contributing Editor Jamie Eckle

■ **COMPUTERWORLD.COM**
Online Editorial Director Scot Finnie
Online Managing Editor Sharon Machlis
Online Features Editor Valerie Potter
Senior Online Projects Editor Ian Lamont
News Editors Ken Mingis, Craig Stedman
Assistant News Editors Mike Bucken, Marian Prokop
Reporters Brian Fonseca, Matt Hamblen, Heather Havenstein, Gregg Keizer, Eric Lai, Linda Rosencrance, Patrick Thibodeau, Jaikumar Vijayan, Todd R. Weiss
E-mail Newsletters Editor David Ramel
Online Channel Editors Johanna Ambrosio, Angela Gunn, Lucas Mearian, Marian Prokop, David Ramel
Online Projects Editor Joyce Carpenter
Associate Editor, Community Ken Gagné
Contributing Editors Preston Gralla, David Haskin

■ **CONTACTS**
Phone numbers, e-mail addresses and reporters' beats are available online at *Computerworld.com* (see Contacts link at the bottom of the home page).
Letters to the Editor Send to letters@computerworld.com. Include an address and phone number for immediate verification. Letters will be edited for brevity and clarity.
24-hour news tip hot line (508) 620-7716
Subscriptions and back issues (888) 559-7327, cw@omeda.com
Reprints/permissions Erik Eberz, (717) 399-1900 ext. 150, computerworld@reprintbuyer.com

■ LETTERS

UML Shifts Specs to User's Point of View

In his Sept. 24 column, "Five Diagrams Beat a Victorian Novel," Michael Hugos makes a compelling case for representing system specifications in some fashion other than simple text, which he claims simply "mire[s] readers in a swamp of boring words."

However, it does seem ironic that he says he is a proponent of schematics and diagrams, yet he derides UML as "a variation on [the] Victorian novel."

Anyone familiar with UML will see that Hugos is criticizing a small part of the UML standard. His "novel" is the increasingly popular Use Case method for defining system requirements. Requirements become a contract between the project sponsor and the development team, so boring or not, some text document is going to have to be written down for all stakeholders to review.

What the Use Case method does is shift the focus from IT to the system user's point of view — something we often overlooked.

As a former UML instructor, I see no problem with Hugos' practice of using process-flow and data-flow diagrams for functional specifications if that is what his business analysts understand. But I cringe when someone criticizes UML because they don't understand it. Those of us who have had to learn a new modeling notation every few years are glad to see a standard evolve.

It takes time to get comfortable with new shoes — just don't criticize the shoemaker for causing you to stumble around the first few times you wear them!

■ **Bob Jones,** *graduate student, Widener University, Chester, Pa., rgjones@mail.widener.edu*

Editor's note: *Michael Hugos provides sample diagrams in the online version of his column. Go to* Computerworld.com*'s Management Knowledge Center to see them.*

We're Quite Ready for Linux on Desktop

I am neither a Linux vendor nor a programmer. I am, however, a Linux end user. As such, I can attest to the error in some of Michael Gartenberg's comments ["Linux Still Doesn't Make It on Desktop," Opinion, Oct. 1].

Most notable is with regard to office suites for the Linux platform. They exist, they function as well as their Microsoft counterparts, they are less expensive (if not free), and they all are capable of generating Microsoft Office-compatible files.

Additionally, as was stated in a recent article in *PC World*, Microsoft's own Office 2007 is only "nearly" backward-compatible with previous versions of the product.

What prevents Linux from widespread desktop adoption are rumors and myths, such as those presented in this opinion piece. If operating system installations were done in business environments by users rather than IT staff, it could be argued that the complexity might prevent acceptance. But such is not the case.

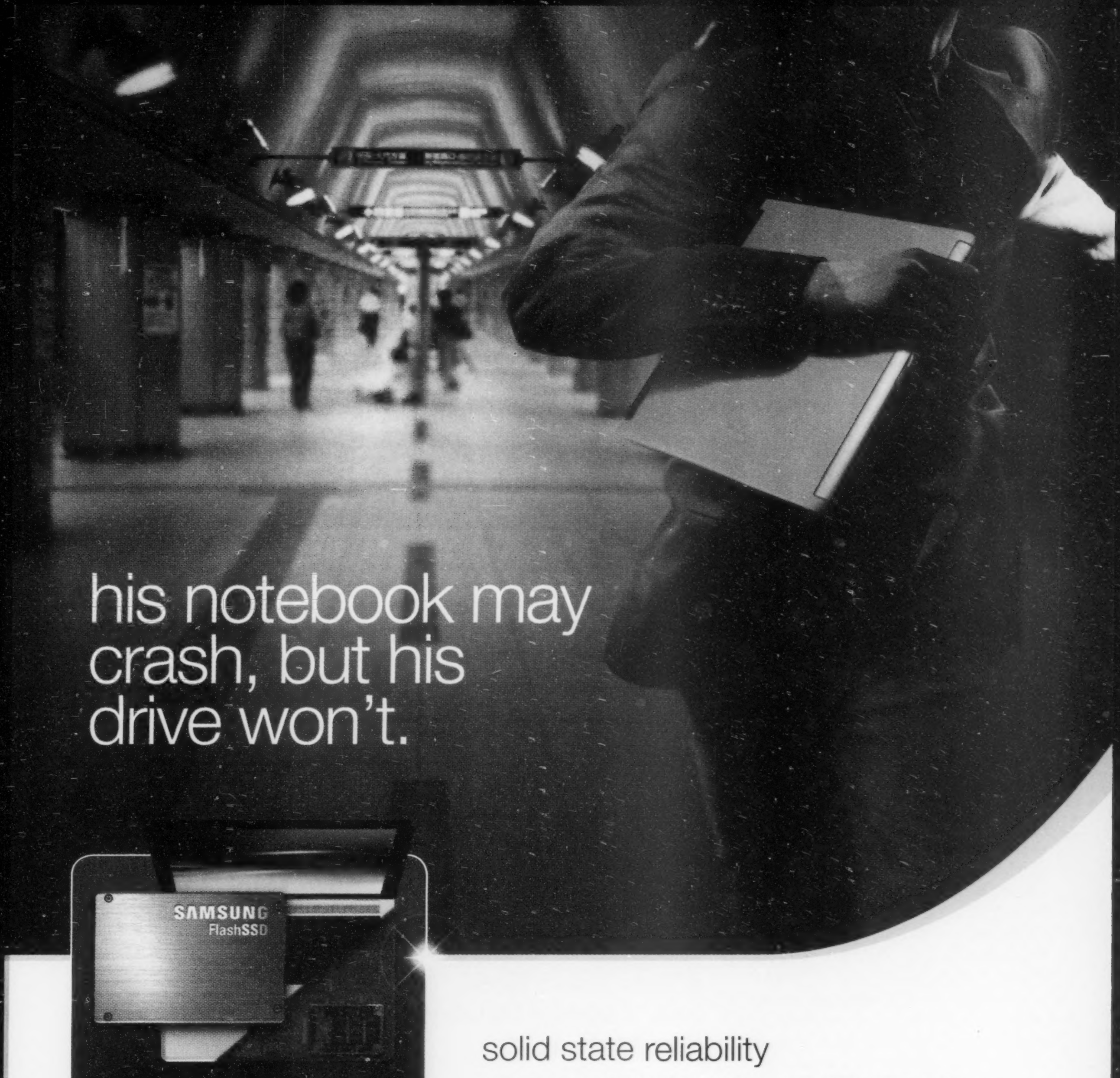
Linux, no matter how useful or viable, must still compete with an entrenched Windows operating system. Only time will tell whether it can overcome the odds.

■ **William Butler,** *technology department staff, Gilmer Independent School District, Gilmer, Texas*

I've had Linux on my desktop for three years, and I want for nothing. There is no such thing as a standard desktop, and there are lots of users who don't need 100% compatibility with Microsoft Office. ITunes installs under Wine very easily in most cases.

Linux may not be there yet (wherever "there" is), but many would argue that Windows isn't either — as soon as Microsoft feels it's not threatened, it stops innovating.

■ **S. Holland,** *systems analyst, Yayasan Pendidikan Cemara Asri, Medan, North Sumatra*


his notebook may crash, but his drive won't.
SAMSUNG
FlashSSD

Samsung Solid State Drive
A new-generation Flash drive available in notebooks from leading OEMs.

endurance (MTBF[1])	> over 2 million hours
shock resistance	> 1500G / 0.5ms
read speed	> 100MB / sec
write speed	> 80MB / Sec
active power consumption	< 0.5W
system boot speed[2]	< 24 sec
operating temperature	-25C ~ 85C

[1] Mean Time between Failure
[2] HP NX9420, XP Pro, Core Duo Processor 2.0Ghz, 512MB RAM, ICH 7, i945 Chipset
© 2007 Samsung. All rights reserved.

solid state reliability

Introducing the new Samsung Flash Solid State Drive (SSD). No moving parts, except some hardworking electrons. A mean time between failures (MTBF) six times longer than a hard drive. Virtually unlimited shock resistance. And power use that extends battery life up to 20%. With a Samsung SSD inside your notebook, your data is always there when you need it.

www.samsungssd.com

SAMSUNG

■ ONLINE CHATTER

RESPONSE TO:

So You Want to Be A Manager

Oct. 1, 2007

Tools are great, but buying the best hammer doesn't make you a carpenter. Paul Glen's primary point is right on: Most people have very distorted notions of what a manager is, what a manager does and what it takes to be successful.

I started managing people in 1992, and I've worked to an SVP position. Over the years I've had dozens of people tell me they want to be managers, and the first thing I do is ask them why. A majority don't understand what they are getting into.

■ **Submitted by:** *Anonymous*

RESPONSES TO:

Women in IT Go East, Data Shows

Oct. 2, 2007

The federal government and many of its IT contractors in the D.C. metro area aggressively pursue hiring goals for diversity candidates, including women. They also offer family-friendly benefits and a workplace well protected from discrimination and harassment. The same is true of many health care-related companies based in the East.

I agree somewhat with the author's observations about the culture in Silicon Valley, but I'm not sure it's a question of inherent competitiveness so much as the pervasive expectation that employees — in many start-ups at least — must be willing to give up a large chunk of their nonwork social life to work in the IT industry there. There are a lot of alpha geeks — predominantly male — for whom "life" equals "worklife."

I guess it's a trade-off that each person, male or female, has to be willing to make for themselves. I personally wouldn't trade time with my son for extra stock options or an earlier promotion, but that's my personal decision. When I job hunt, I look for companies that value my hard work, but provide a work/life balance that fits my preferences. I'm a guy, but I suspect more women than men may share my preferences.

■ **Submitted by:** *Sophos*

Women aren't as interested in techie positions as they are in application and business functionalities. Take a look at your organization. How many women are on the server, network side vs. application and business development? Want to sit with the techno geeks and create great code, or work with customers, business groups and departments to solve real business issues and challenges? It's a pretty easy decision for me. Give me the soft side of IT and mix in a little technology, and you have applications development. The techie firms just don't provide that type of opportunity.

■ **Submitted by:** *Philly*

RESPONSE TO:

Great Career Advice I Ignored

Oct. 1, 2007

Great career advice that I didn't take: that I had to get into management to be successful/influential. After a short stint as a department head with 17 direct reports, I realized that I was MUCH happier as an individual contributor in a technology leadership role. No "C" jobs in my future!

■ **Submitted by:** *Anonymous*

RESPONSES TO:

iPhone Users Now Fear Security Patches, Say Analysts

Oct. 1, 2007

Quoting Andrew Storms, director of security operations at nCircle Network Security Inc.: "But when the update appeared, it was almost certain that some huge percentage of devices for which the patches were intended would be broken."

This is such an idiotic quote. I'd like to get an idea of exactly how many iPhones got bricked from this update. Is it 1%, 5%, 10%? The quote makes it sound like practically all iPhones were bricked, which is obviously not the case. Personally, I think this whole issue is totally blown out of proportion by a very vocal and minuscule minority who are super-upset because they now own a very expensive paperweight that they broke themselves.

■ **Submitted by:** *Sophos*

It's your equipment. Modify it all you want. Just don't cry when you want the best of both worlds and they don't work with each other. You were warned, and if you got spanked, too bad, so sad.

■ **Submitted by:** *Dads*

RESPONSE TO:

N.Y. Woman Sues Apple, Jobs Over iPhone Price Cut

Oct. 1, 2007

Unlocked yours?
— diePhone
Upset about the price cut?
— cryPhone
Wondering what all the fuss is about?
— whyPhone
What it will NEVER be?
— myPhone

■ **Submitted by:** *Matt*

RESPONSE TO:

Euro Think Tank Recommends Unbundling Windows

Sept. 24, 2007

I am not a fan of either MS or Apple, but I find the continued idiocy emanating from the EU to be disturbing. This latest report is absurd.

I can't think of anyone I know who would want to buy the PC separate from the OS. The Globalisation Institute needs to leave their ivory tower and look at the ramifications of what they suggest. I believe that while personal Apple sales may increase, businesses will spend more time/money configuring PCs for office use.

■ **Submitted by:** *somewhere in N.Y.*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com**.

The Internet can't hide from the AT&T LaptopConnect Card.

Tired of playing hide and seek with the Internet? Get the AT&T LaptopConnect Card and easily access the Internet at mobile broadband speeds when you're out of the office, on the road, away from hotspots.

> Delivers mobile broadband speeds in more than 165 major U.S. markets and more cities worldwide than any other U.S. carrier.

> Send and receive email, download large attachments, and access corporate systems at mobile broadband speeds.

> Enables secure laptop connections to AT&T BroadbandConnect and EDGE networks.

> Fast and easy set up.

LaptopConnect Card 3G
Sierra Wireless AirCard®875
GLOBAL COMPATIBILITY
at&t

FREE

AT&T Global 3G LaptopConnect Card

after $100 mail-in rebate with 2-year service agreement on DataConnect plan $59.99 or higher.

The new at&t
Your world. Delivered.

For more information, visit www.wireless.att.com/laptopconnect or go to your nearest AT&T store.

Coverage not available in all areas. **Limited-time offer.** Other conditions and restrictions apply. See contract and rate plan brochure for details. Subscriber must live and have a mailing address within AT&T's owned network coverage area. Up to $36 activation fee applies. Equipment price and availability may vary by market and may not be available from independent retailers. **Early Termination Fee:** None if cancelled in the first 30 days; thereafter $175. Some agents impose additional fees. **Sales tax** calculated based on price of unactivated equipment. Certain email systems may require additional hardware and/or software to access. Service provided by AT&T Mobility. ©2007 AT&T Knowledge Ventures. All rights reserved. AT&T and the AT&T logo are trademarks of AT&T Knowledge Ventures and/or AT&T affiliated companies.

Are your employees trying to tell you something?
Tell them they're getting new technology from CDW.

Monitor sold separately

Lenovo ThinkCentre® A61e

- AMD Sempron™ Processor Model LE-S1150 (2GHz)
- Memory: 1GB
- 80GB hard drive
- CD-RW/DVD-ROM drive
- Windows® XP Professional

lenovo

AMD Sempron

$549.99
CDW 1286465

HP Flat Panel Monitor L1745

- 17" height-adjustable LCD
- Contrast ratio: 500:1
- Three-year limited parts, labor and backlight warranty

$234.99 CDW 1187097

hp invent

[1] Price reflects $100 instant savings; offer valid through 10/31/07 or while supplies last. [2] Purchase five licenses OR one processor license to qualify for the Microsoft Open License Value program; media must be purchased separately; call your CDW account manager for details. [3] Up to $30,000 in partner subsidy dollars on Microsoft Office 2007 License OR License with Software Assurance purchases made between 8/1/07 through 1/31/08; call your CDW account manager for details. Offer subject to CDW's standard terms and conditions of sale, available at CDW.com. ©2007 CDW Corporation

Lenovo ThinkCentre® A61

- Dual-Core AMD Athlon® 64 X2 Processor Model 4000+ (2.10GHz)
- Memory: 1GB
- 80GB hard drive
- CD-RW/DVD-ROM drive
- Windows® XP Professional

lenovo

AMD 64 Athlon

$599.99
CDW 1282003

Monitor sold separately

HP LaserJet® P3005n Printer

- Network-ready, monochrome laser printer
- Print speed: up to 35 ppm
- Duty cycle: 100,000 pages per month

Formerly HP LaserJet 2430n

hp invent

$799 PRINTER CDW 1063660
-100 INSTANT SAVINGS[1]
$699

$579.99
CDW 1276021

lenovo

intel Pentium Dual-Core inside

Lenovo ThinkCentre® A55

- Intel® Pentium® Dual-Core Processor E2140 (1.60GHz)
- Memory: 1GB
- 80GB hard drive
- CD-RW/DVD-ROM drive
- Windows® XP Professional

Monitor sold separately

Microsoft® Office Professional Plus 2007

- User interface places commands at your fingertips
- File format with support for XML using Office Open XML allows for smaller file sizes and the ability to share data easily across products

Open License Value and Software Assurance Annual payment[2,3] **$289.99** CDW 863099

Microsoft Office Professional Plus 2007

Lenovo ThinkCentre® A55

- Intel® Core 2 Duo® Processor E4300 (1.80GHz)
- Memory: 1GB
- 80GB hard drive
- DVD-ROM drive
- Windows Vista® Business Edition

lenovo

intel Core 2 Duo Dual-core. Do more.

$699.99
CDW 1259494

Monitor sold separately

HP Flat Panel Monitor L2045w

- 20" analog and digital widescreen LCD
- Contrast ratio: 600:1
- Three-year limited parts, labor and backlight warranty

$264.99 CDW 1070837

hp invent

We're there with the technology solutions you need.

With the benefits of today's improved technology, there's never been a better time to upgrade your systems. At CDW, we're there with a dedicated personal account manager who has all the desktop knowledge you need to help you become more efficient in the office. And with best-of-breed products from the top names in the industry, you not only get what you need, you get it whenever you need it. So call CDW today and get the technology you need to make the most of your day.

CDW®

CDW.com | 800.399.4CDW

The Right Technology. Right Away.™

News Digest

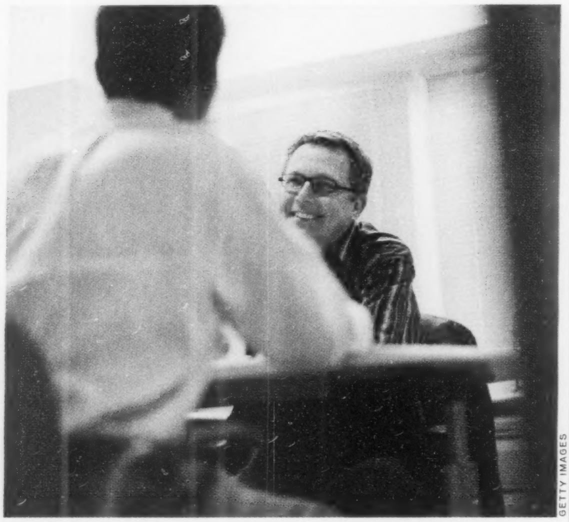
FIND THE FULL STORIES AT
COMPUTERWORLD.COM

THE WEEK AHEAD

MONDAY: Storage Networking World Fall 2007, sponsored by *Computerworld* and the Storage Networking Industry Association, opens its four-day run in Dallas.

TUESDAY: IBM is scheduled to announce its financial results for the third quarter of 2007.

WEDNESDAY: The Web 2.0 Summit gets under way in San Francisco. Scheduled speakers include Steve Ballmer, Rupert Murdoch and the CEOs of eBay, MySpace and Facebook.



GETTY IMAGES

MANAGEMENT

CIO Calls for IT to Use a More Personal Touch

ORLANDO

LESLIE Brennan, CIO of the New York State Department of Environmental Conservation, drew laughs at Gartner Inc.'s IT Expo here when she described how her organization improves communication with users — by meeting face to face rather than using e-mail.

Improving communication "is really talking to the business, not e-mailing the business," she told the BlackBerry-carrying audience members. "It's more than just getting up and talking business — it's talking to each other."

Encouraging face-to-face interaction teaches IT professionals "to behave a little bit more professionally — a little more businesslike," Brennan added.

Other IT managers at the conference agreed that CIOs must get the entire IT operation to embrace business-oriented thinking.

"You are only as good as your staff," said Michael Goodwin, senior vice president of IT at Hallmark Cards Inc. in Kansas City, Mo.

Goodwin said that IT staffers need to spend time with sales and operations personnel "so they can better understand the challenges and issues they are facing and bring back solutions and capabilities that add value."

Brennan said that after attending company management meetings, she types up her notes and distributes them to the entire staff.

That information can help the IT staff "become more attached to the mission of the organization instead of thinking they are in the IT shop," Brennan said.

When IT developers approach Patricia Graham, CIO at CenterPoint Energy Inc. in Houston, about possible system changes, they must provide technical details and information on how the changes will affect the business.

"I'd like it to be articulated in terms of what it means for the business," she said.

As IT workers gain more business acumen, the role of the CIO must also evolve, noted Leo Genders, CIO of the Ohio Bureau of Workers' Compensation in Columbus.

"The CIO's role is essentially still defining itself," Genders said, noting that "they are not teaching how to be a CIO in college."

The new role of the corporate CIO is in its infancy, he said, and "we have actually a chance to shape it."

— Patrick Thibodeau

SECURITY

Commerce Bank Thwarts a Major Database Hack

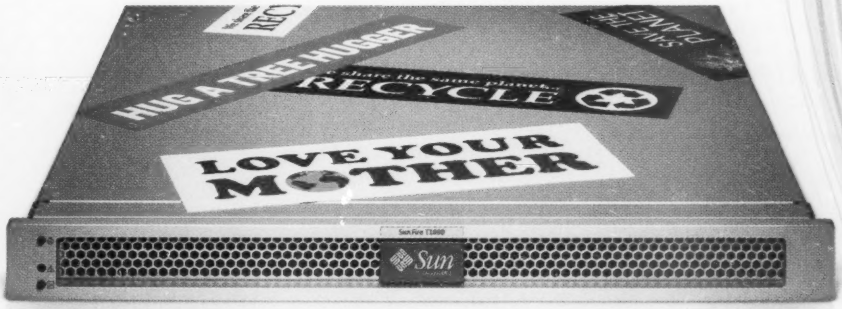
A Midwestern bank last week said it was able to deflect most of a hacking attempt on its database, but not before some customer information was divulged.

Commerce Bank NA, which operates in Missouri, Kansas, Illinois, Oklahoma and Colorado, last week said a hacker had breached a database with about 3,000 customer records and accessed 20 of them. The hacking was quickly detected and stopped, said the unit of Kansas City, Mo.-based Commerce Bancshares Inc. Officials added that law enforcement agencies were notified of the breach.

The bank said that it is contacting all customers who may have been affected and that it will provide them with free credit monitoring services for 24 months.

Commerce Bank didn't disclose how the hackers accessed its database.

JEREMY KIRK,
IDG NEWS SERVICE


HUG A TREE HUGGER
RECY
...share the same planet...
RECYCLE
SAVE THE PLANET
LOVE YOUR MOTHER
Sun Fire T1000
Sun

Save Power. Save Space. Save Money. Save the Planet. (Be an IT Hero.)

See how Sun's new Eco Innovation℠ Initiative can help you cut your energy costs by 60%, increase your server efficiency by as much as 85% and consolidate your datacenters by up to 75%, all with a simple 3-step approach: assess, optimize and virtualize. With open source Solaris,™ virtualization is free, making it easier for you to get maximum utilization of your resources. See how faster can be cooler, better can be cleaner and cheaper can be greener.

Good for your business. Good for our planet.

Get energy-efficient systems at sun.com/ecoinnovation.

Sun microsystems | solaris | ULTRASPARC

Who needs expensive, proprietary virtualization software when, hey, you can get it free with open source Solaris.
© 2007 Sun Microsystems, Inc. All rights reserved. All logos and trademarks are property of their respective owners.

SOFTWARE

SAP-Business Objects Deal Stirs User Anxiety

SAP AG's agreement last week to buy Business Objects SA for $6.8 billion left some of the latter company's users fearing a decline in support and a decrease in emphasis on product development.

Analysts noted that officials at SAP must address overlap between the two vendors' product lines.

> **"My hope is Business Objects will not spend years and years only trying to better integrate its product suite with SAP's, but will use this acquisition to gain access to more capital to enhance what it already has.**
>
> **JONATHAN ROTHMAN**, DIRECTOR OF DATA MANAGEMENT, EMERGENCY MEDICAL ASSOCIATES

Jonathan Rothman, director of data management at Emergency Medical Associates in Livingston, N.J., and a user of various Business Objects business intelligence tools, said he hopes that the deal won't force the vendor to change its development plans.

"My hope is Business Objects will not spend years and years only trying to better integrate its product suite with SAP's, but will use this acquisition to gain access to more capital to enhance what it already has," he said. He also called on SAP not to "add layers and layers of corporate decision-makers and make Business Objects slower to adapt to user needs.

"Otherwise, as a core Business Objects user, I would see no advantage to this acquisition," he said.

Erik Brokaw, enterprise architect at Blue Cross and Blue Shield of Kansas City, said he is more optimistic about the combination but still called on SAP "to provide the same level of support for the business intelligence solutions as Business Objects does today."

Blue Cross uses multiple BI tools from Business Objects, he said.

Bernard Liautaud, chairman and founder of Paris-based Business Objects, said the company will remain an "independent business" after the deal closes. He noted that while the BI vendor wasn't looking to be acquired when it was approached by SAP in July, "we were, of course, willing to listen."

John Hagerty, an analyst at AMR Research Inc. in Boston, said the acquisition comes in the midst of efforts by both companies to extend performance management product lines.

"It's going to require some backtracking on both fronts to make it look more complementary," he said.

— Heather Havenstein, with James Niccolai of the IDG News Service

Short Takes

BEA Systems Inc. late Friday rejected Oracle Corp.'s unsolicited bid to buy the middleware vendor for $6.7 billion in cash. In a letter to Oracle President Charles Phillips, the BEA board said that it had "concluded that the proposal significantly undervalues BEA Systems."

After Oracle had launched the bid earlier in the day, Phillips had said in a statement, "We look forward to completing a friendly transaction as soon as possible."

Microsoft Corp. last week released six security updates to fix nine flaws in Word, Outlook Express, Internet Explorer and the Kodak image viewer that ships with Windows. Four were described as "critical."

The U.S. Supreme Court has denied an appeal by Hewlett-Packard Co. to dismiss a class-action suit filed against Compaq Computer Corp., which HP bought in 2002. The suit alleges that Compaq would not replace defective disk drives sold with its PCs.

SECURITY

'Management Glitch' Is Blamed in Ohio Tape Theft

An Ohio state official must surrender a week of future vacation time as punishment for a "management glitch" that led to the theft of a backup tape holding Social Security numbers and other personal data on more than 100,000 state employees and taxpayers.

The state issued the punishment late last month to Jerry Miller, payroll team leader for the Ohio Administrative Knowledge System ERP project of the Ohio Department of Administrative Services, according to Ron Sylvester, deputy director in the department's communications office.

The tape was stolen in June from an intern's car.

Sylvester also noted that although the tape was his department's responsibility, it was regularly handled by individuals from other agencies.

An Ohio state official will lose a week's leave over a tape theft.

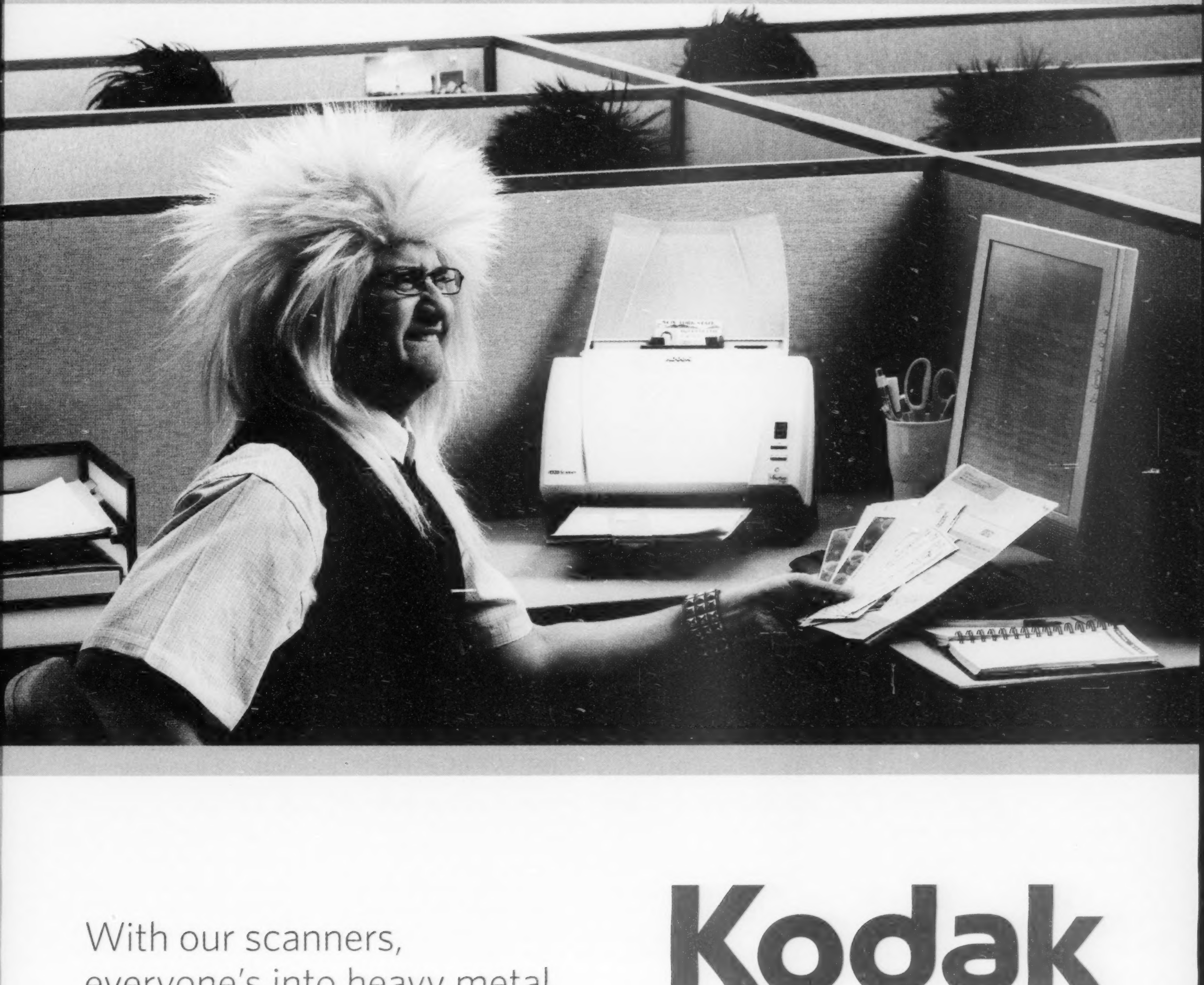
"Part of the problem is that [the data] was outside of any one person's hands. There were people coming in from agencies to do data migration and testing" who were adding data to the drive, he said.

"One lesson that the state learned is that we need to throw more resources at security and privacy when we have an issue like that," he added.

Lauren Whitehouse, an analyst at Enterprise Strategy Group Inc. in Milford, Mass., said the minimal punishment indicates that there isn't a widespread security problem.

"If there was a pattern of incompetence," she said, "then typically the person would lose their job."

– BRIAN FONSECA



With our scanners,
everyone's into heavy metal.

Kodak

What's different about **Kodak** i1200 and i1300 Series Scanners? It's what's inside: a heavy-duty metal paper transport that's reliable scan after scan. What else makes these scanners rock? **Take our insider's "tour" and find out. Just visit www.kodak.com/go/heavymetalCW.**

Kodak i1200 & i1300 Series Scanners

©Kodak, 2007. Kodak is a trademark.

Q&A

Robert Keefe

Incoming **SIM head** says IT faces **hiring woes** at all levels.

MEMPHIS
Robert Keefe, *senior vice president and CIO at Atlanta-based Mueller Water Products Inc., will become president of the Society for Information Management at the start of next year. In an interview with* Computerworld *at SIM's annual conference here last week, Keefe talked about the problems IT managers face in finding qualified staffers.*

Are SIM members having a difficult time finding veteran IT workers with strong business experience? Working with the business is part of our profession; it's not just technology anymore. A lot of the onus falls on the individual [IT workers] to get the training and experience they need. They're out there, but they're hard to find. You have to pay a little bit of a premium to get them.

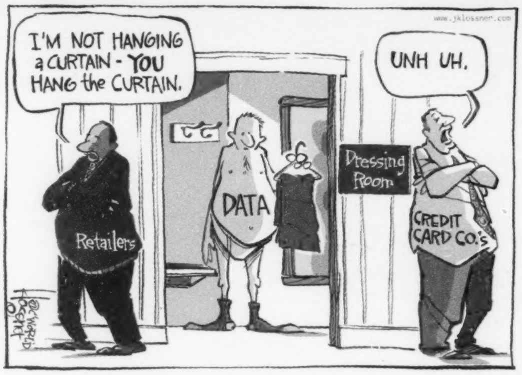
What specific IT jobs are hardest to fill? Business relationship managers to help with the alignment component. Those are the tougher finds. Fortunately, you only need a few of those.

Have SIM members had problems finding entry-level IT workers with adequate communication abilities and other soft skills? First and foremost, there are not enough [computer science and IT majors] due to media coverage on offshoring. Personally, I look to recruit out of universities that have that emphasis [on soft skills]. I'm a mentor in residence at a university, and they're working on bringing these soft skills into the program and integrating the business side with it.

Are signing and retention bonuses for some IT workers coming back into vogue? Yes. But for Generation Y, money isn't the only thing that drives them. They're also looking for interesting challenges and an inviting [work] environment. It's tough to convey that in the interview process.

— Thomas Hoffman

BETWEEN THE LINES *By John Klossner*



BENCHMARKS LAST WEEK

Oracle Corp. agreed to buy Logical Apps Inc., a maker of software for managing a company's processes for complying with complex regulations. The purchase price was not disclosed.

ONE YEAR AGO: Google Inc. launched its Web-based Docs & Spreadsheets application, which combined the company's stand-alone word processing, spreadsheet and presentation software.

15 YEARS AGO: AT&T introduced the Hobbit family on microprocessors, which were designed for use in emerging handheld devices.

Global Dispatches

Gateway Plans to Buy Packard Bell

WIJCHEN, THE NETHERLANDS – Gateway Inc. last week agreed to acquire PC maker Packard Bell BV, which is based here, for an undisclosed sum.

Gateway had been first in line to buy Packard Bell's parent firm, PB Holdings Co., under a 2006 agreement with John Hui, PB's majority owner. Hui had sold privately held eMachines Inc. to Gateway in 2004.

Gateway said the acquisition will be funded by Taipei-based Acer Inc., which in August announced plans to buy Gateway for $710 million.

The deal is expected to close in the first quarter of 2008.

Agam Shah,
IDG News Service

Australia Launches Infrastructure Plan

CANBERRA, AUSTRALIA – The Australian government last week launched a critical-infrastructure protection system that was created to improve national responsiveness to major infrastructure outages.

Work on the $20 million Australian ($18.1 million U.S.) Critical Infrastructure Protection Modeling and Assessment (CIPMA) program was started in 2005 by government research agencies and the office of Attorney General Philip Ruddock.

The CIPMA database collates operational data from the banking and finance, communications, energy and water industries, said Greg Scott, technical development team leader at Geoscience Australia, a government agency that oversees geoscience and geospatial research.

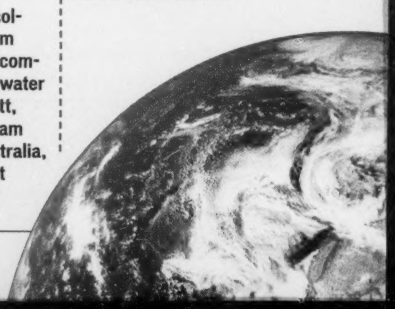
Scott said analysis of the data in the system could help government agencies and utilities identify "where to build extra backup and where weaknesses exist."

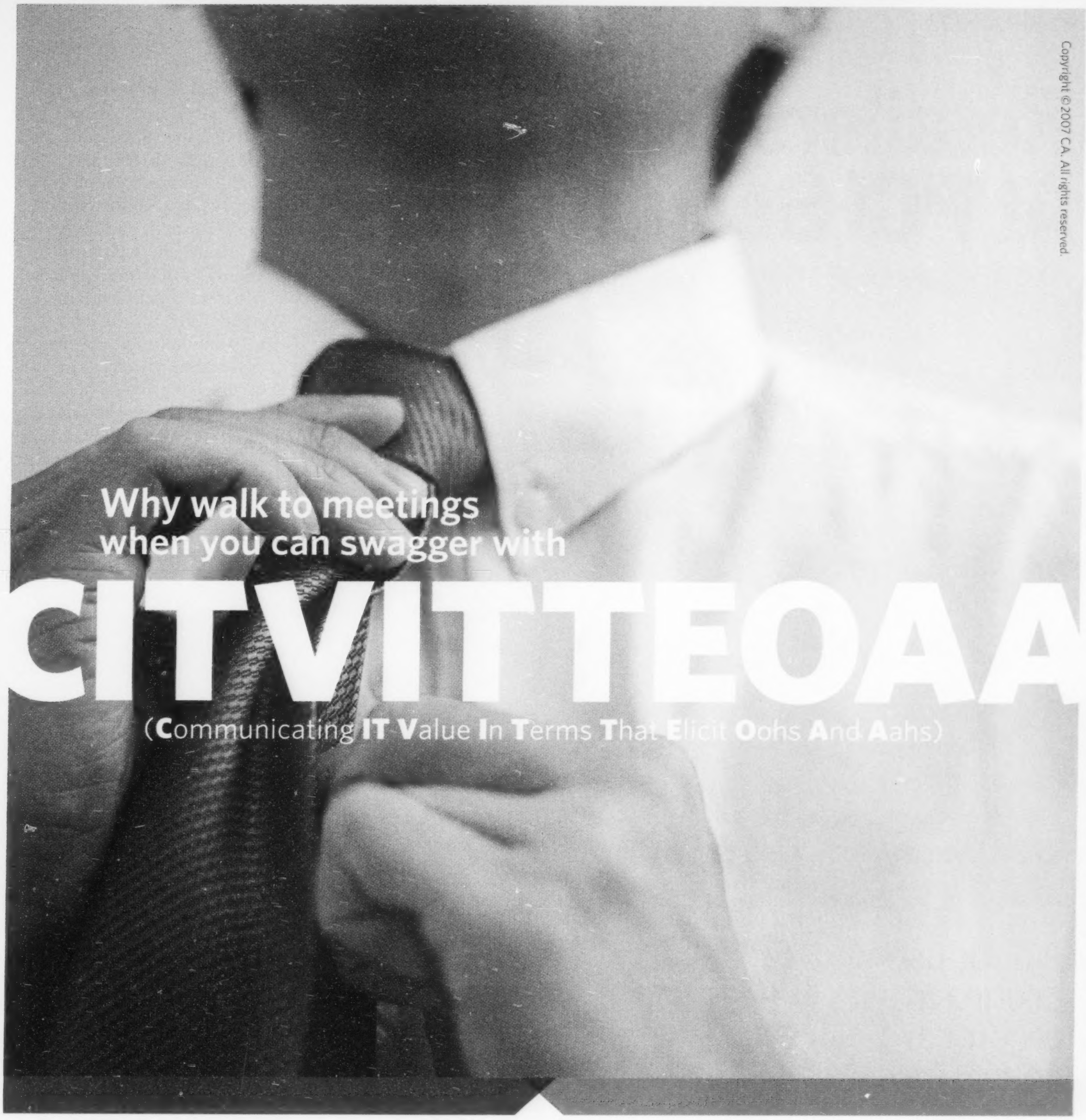
Darren Pauli,
Computerworld Australia

BRIEFLY NOTED

Google Inc. last week acquired Helsinki, Finland-based Jaiku Ltd., maker of Jaiku Mobile, a software application that lets mobile phone users post and browse short messages called "jaikus." Terms of the deal were not disclosed.

Linda Rosencrance




Why walk to meetings
when you can swagger with
CITVITTEOAA
(Communicating IT Value In Terms That Elicit Oohs And Aahs)

Copyright © 2007 CA. All rights reserved.

It all begins with a single view of your entire IT portfolio—a scenic overlook of your assets, resources, projects and services. From there, you can plan better, manage better. You can make informed decisions, smart trade-offs and wise investments. In short, you can budget, forecast and track with insight, accuracy and verve. Yes, verve. And that's everything you need to translate IT value into terms that bring nods of enlightenment from your business partners. To learn more, download the white paper "Generating Premium Returns on Your IT Investments" at **ca.com/itg**.

GOVERN · MANAGE · SECURE

ca™ Transforming IT Management

Retailers Take Swipe At PCI Security Rules

GETTY IMAGES

An industry group says credit card companies must stop forcing businesses to store card data.

By Jaikumar Vijayan

SIMMERING discontent over the Payment Card Industry data security standard boiled over this month when the National Retail Federation publicly called on credit card companies to take more responsibility for storing card data.

In a terse letter to the PCI Security Standards Council, which oversees implementation of the standard, NRF CIO David Hogan called on credit card companies to stop making retailers "jump through hoops to create an impenetrable fortress" to protect card data.

Instead, he asked the council to work with retailers "to eliminate the incentive for hackers to break into their systems in the first place."

The Oct. 2 letter from the NRF, whose members include most major U.S. retailers, was sent after many of the trade association's members apparently failed to meet a Sept. 30 deadline to comply with the PCI data security standard.

The standard requires retailers to implement a set of prescribed controls for protecting cardholder data. Compliance is mandated by credit card companies Visa International Inc., MasterCard International Inc., American Express Co., Discover Financial Services LLC and the Japan Credit Bureau.

About 325 Tier 1 merchants — those that process more than 6 million credit card transactions per year — are subject to monthly fines of $5,000 to $25,000 for failing to comply with the standard.

In an interview, Hogan argued that retailers and others accepting payment-card transactions should not have to comply with the PCI mandate that they store certain card data for up to 18 months in case it's needed to mitigate disputes.

He suggested that credit card companies and their banks, not retailers, should be responsible for storing the data.

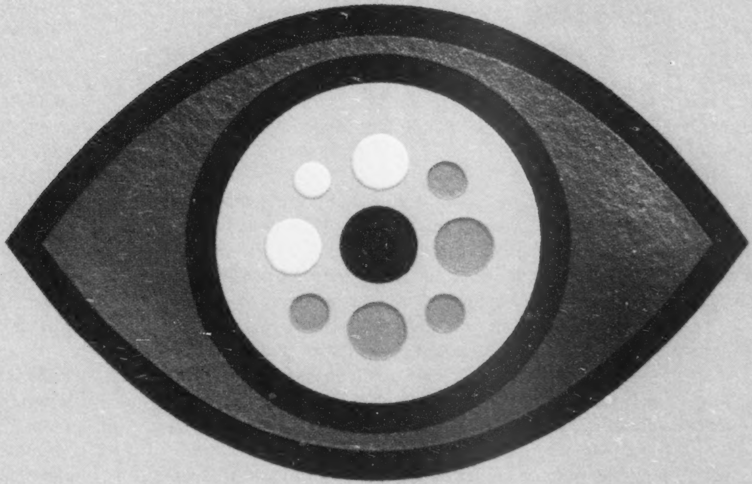
In that case, Hogan said, retailers would only need to store an authorization code provided at the time of a sale to validate a charge, plus a receipt with truncated credit card information to handle returns and refunds.

"It is a very fundamental shift," he said. "But if you think about it, it is a very common-sense approach."

The PCI mandates now require that retailers build unnecessary "fortresses" around credit card data, Hogan said. "We build these higher walls, and the hackers bring in taller ladders, and this kind of keeps scaling up all the time," he added.

Gartner Inc. analyst Avivah Litan said that the NRF letter makes a "sound argument. "It's totally reasonable to tell the banking system and payment system that 'We don't want to store this data anymore,' " Litan said. "If they aren't storing this data, many of these [PCI] requirements go away, and the scope of the compli-

Continued on page 24



ALTERNATIVE THINKING ABOUT SOFTWARE:

Make Your Competition
Call You Names (Like Omniscient).

Alternative thinking is designing software that makes your technology a slave to your business, not the other way around.

It's combining foresight, flexibility and control to encourage unyielding innovation and merciless productivity.

It's locking down requirements, testing ahead of time, monitoring after implementation and automating cumbersome processes (earning a few well-deserved pats on the back along the way).

It's demanding hard, cold business metrics and working with HP to reach them.

Technology for better business outcomes. hp.com/alt

hp

©2007 Hewlett-Packard Development Company, L.P.

Continued from page 22

ance effort is much more restricted."

Visa, which has been at the forefront of the PCI initiative, did not respond to a request for comment on the NRF letter.

A Visa spokesman, however, did note that a section of the PCI rules require that retailers purge their systems of certain types of cardholder data, such as card-verification codes and block data for personal identification numbers (PIN).

IT managers and security experts listed various frustrations with PCI regulations and those who enforce them in explaining why some retailers are missing the deadline.

LEGACY ISSUES

Amer Deeba, chief marketing officer and vice president of product marketing at Qualys Inc., a Redwood Shores, Calif.-based vendor of IT security systems, noted that large companies with highly distributed, older computing environments can expect to have an especially hard time applying PCI security controls.

"Many of the big [retailers] are handling credit card information from all around the world and storing it in legacy systems that are no longer supported or updated" by vendors, Deeba said.

It took a yearlong effort for Steak n Shake Co., a Tier 1 merchant, to comply with the PCI standard, said Sean Smith, technology director at the Indianapolis-based restaurant chain.

The rigorous effort, he said, included the creation of security controls, such as systems to monitor file integrity and capture event log data, for a "very legacy environment."

> **"We build these higher walls, and the hackers bring in taller ladders, and this kind of keeps scaling up all the time.**
>
> **DAVID HOGAN,** CIO, NATIONAL RETAIL FEDERATION

A proper security upgrade in a distributed legacy environment could require system upgrades and months of dedicated manpower that could cost millions of dollars, Gartner's Litan noted.

The high potential cost has prompted many retailers to apply "Band-Aids to patch the problems" while they juggle other priorities at the same time, she said, adding that "the effort is far from straightforward."

Jay White, global information protection architect at Chevron Corp. in San Ramon, Calif., also noted that different PCI auditors often interpret the regulations differently.

"The biggest challenge with PCI is that you are at the mercy of the auditors and their skill set," White said. With some auditors, "everything becomes black and white," while others take a more nuanced view of the controls a company might have in place, he said.

White noted that Chevron has implemented a lot of controls that are not PCI-specific and are instead part of a core set of steps the company has taken to address multiple compliance objectives.

While the PCI standard allows companies to use certain alternative controls under some circumstances, PCI auditors may disagree on what measures are OK.

"The result is that a lot of companies have gone through multiple assessments and keep getting a lot of different answers," about their compliance, said Alan Bird, vice president of business development at Cyber-Ark Software Inc., a security vendor in Newton, Mass. "A lot of people are filing a lot of papers to get their compensating controls signed off as being compliant."

White said that Chevron has dedicated "literally an army of people" to ensure that the company complies with PCI and other regulatory requirements.

He noted that as part of the effort, the oil company set up a technical control board to, among other things, keep track of vulnerabilities, patches and other security issues that could affect compliance.

"I can see where companies can run into problems if they are treating security as an afterthought," he added.

Steve Schlarman, chief compliance strategist at Brabeion Software Corp., a Reston, Va.-based developer of compliance management software, said it's important that companies sustain efforts to comply with the PCI standard.

"Sustainability is a key point," he said. "In most organizations, their network of today is not what their network of tomorrow is going to look like."

Branden Williams, director of the PCI practice at security vendor VeriSign Inc. in Mountain View, Calif., added that retailers must continually take into account ongoing changes in the business and threat environments to avoid falling out of compliance.

"[Retailers] are treating PCI like a project and not as a journey," and therefore they often fail to implement adequate program management processes, he said.

And even companies that do achieve PCI compliance "are often just one change control away from noncompliance," Williams said.

FINES LEVIED

Though the credit card companies have kept mum about whether retailers have been penalized for noncompliance, Garter noted in a report that several companies were fined even before the Sept. 30 deadline.

For example, Visa levied over $4.5 million in fines in 2006 and $3.4 million a year earlier, the report said.

The fines were assessed against merchant banks that authorize retailers to accept credit card transactions. The banks, in turn, passed the fines along to the merchants, the report noted.

Fines were also levied against companies that had been hit with data breaches or had been found to be storing magnetic stripe data contained on credit cards.

Bird noted that the decision by credit card companies not to announce the fines may be causing some merchants to believe the standards aren't being seriously enforced.

"If the credit card brands want this thing to move ahead," Bird said, "they are going to have to publicly levy some pretty hefty fines against major retailers" for noncompliance with PCI requirements. ■

Xeon inside

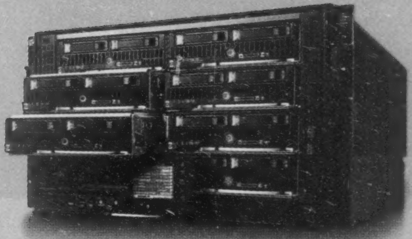
Quad-core. Unmatched.

Alternative Thinking About Server Rooms:

ADDITION THROUGH SUBTRACTION.

Take away the jungle of cables. Take away the so-called "normal" energy requirements and maintenance. What do you have? Introducing the HP BladeSystem c3000. All the technology of our larger BladeSystem in an efficient, compact, affordable package.

Technology for better business outcomes.



Powered by the Quad-Core Intel® Xeon® Processor[1]

See how less is more. Visit hp.com/go/nocompromise9
1-888-277-9690

1. Intel, the Intel logo, Xeon, and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and other countries.
The information contained herein is subject to change without notice. © 2007 Hewlett-Packard Development Company, L.P.

■ MOBILE AND WIRELESS

Privacy Concerns Dog IT Efforts to Implement RFID

Employees often rebel against plans to include chips in corporate ID badges. **By Matt Hamblen**

BOSTON

PRIVACY CONCERNS related to the use of radio frequency identification technology are reaching new heights, as legislators increasingly look to restrict RFID deployments and corporate employees criticize efforts to use it in identification badges.

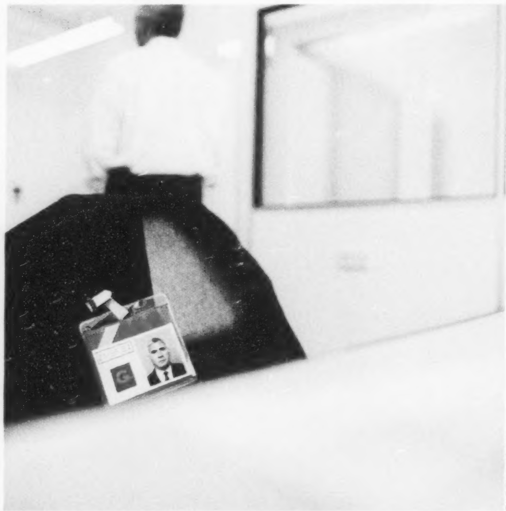
At the same time, champions of the technology contend that not enough is being done to promote the value of RFID. For example, they say, it can be used to track tainted foods or counterfeit drugs or to reduce inventory-tracking costs.

IT executives attending the RFID World conference here last month said employee fears have forced some companies to change or even cancel plans to use badges embedded with RFID technology.

About 150,000 workers at The Boeing Co.'s Integrated Defense Systems unit in 70 countries now use RFID-embedded badges to gain access to buildings, said Steven Georgevitch, senior manager of supply chain technology. But adding the technology to ID badges at the St. Louis-based aircraft manufacturer was not an easy task, he acknowledged.

Implanting RFID chips in badges "is a really, really big concern" among employees, Georgevitch said. "Employees will always ask . . . 'Will they track me in the bathroom?' "

Georgevitch said the company was able to overcome many of the privacy concerns by working closely with employees to explain the purpose of the technology and to hear their comments, he said.



GETTY IMAGES

> **"Most IT people never want to talk to workers, but I say go test [RFID with them] so people feel comfortable.**
>
> **STEVEN GEORGEVITCH,** SENIOR MANAGER OF SUPPLY CHAIN TECHNOLOGY, BOEING INTEGRATED DEFENSE SYSTEMS.

"Most IT people never want to talk to workers, but I say go test [RFID with them] so people feel comfortable," he said.

At Beth Israel Deaconess Medical Center, employee concerns prompted the abandonment of plans to add RFID technology to employee badges about a year ago, said CIO John Halamka.

"The staff reaction was, 'Oh my God, Dick Cheney just wants to watch me,' " said Halamka, who is a *Computerworld* columnist. Halamka said the Boston-based health care organization uses RFID to track medical equipment, which cuts the staff time previously needed to find the devices.

Ben Aderson, manager and counsel for technology policy and state government affairs at the AeA, formerly known as the American Electronics Association, noted that more and more state legislatures are seeking to limit the use of RFID technology. While RFID privacy concerns "are taken very seriously in state governments across the U.S.," most legislators don't understand the value of the technology, he contended.

Aderson said 50 bills aimed at limiting RFID were introduced in 19 states in 2007, and three became law. However, he noted, "nothing catastrophic has passed to completely ban RFID in a state."

Wisconsin and Idaho have passed laws prohibiting the implantation of RFID chips in people without their consent, said Aderson, adding that five more states are debating similar measures. Still others, such California, have laws requiring businesses to notify consumers that a product has a tag.

"A concern of ours is that people don't realize how predominant RFID chips already are," he said, noting that some of the laws would cover cell phones equipped with the chips. The RFID industry "has to create knowledge of the value of RFID," Aderson added. "That's a very key element, to emphasize what is out there that consumers benefit from."

Jim Harper, director of information policy studies at the Cato Institute said that the RFID industry should agree to oppose using RFID to identify individuals, their locations and backgrounds.

"Let's not do human identity stuff," Harper said. "Great things are coming from RFID, but we want it done right to protect privacy." ■

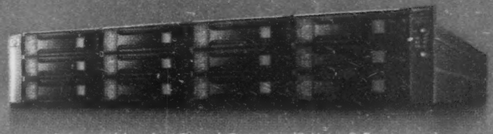
intel
Xeon inside
Dual-core.
Do more.

Alternative Thinking About Storage:

STORAGE UTOPIA IS NOT A MYTH.

Imagine a storage environment that's simple, straightforward and virtually effortless. The HP StorageWorks 1200 All-in-One Storage System lets you manage your ever-growing data using a simple Windows® application, in a language you already know. Call it utopia, nirvana, or just plain easy.

Technology for better business outcomes.



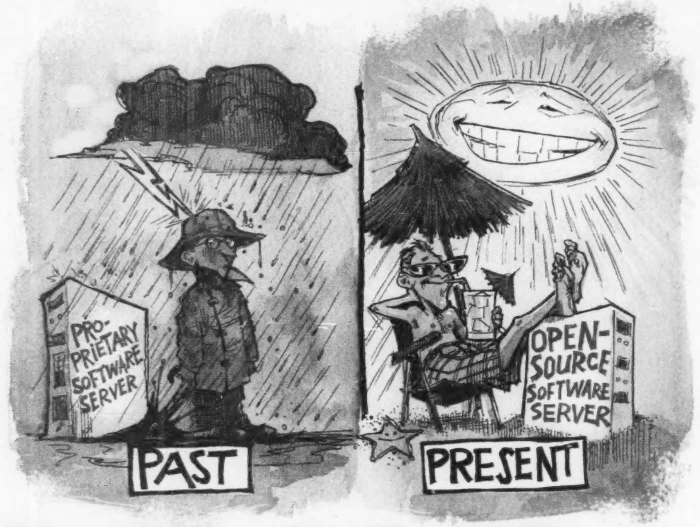
Powered by the Quad-Core Intel® Xeon® Processor[1]

Experience a utopian world of storage. Visit hp.com/go/storageutopia2
1-888-490-8043

1. Dual-Core is a new technology designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefit; check with software provider to determine suitability; not all customers or software applications will necessarily benefit from use of this technology. Intel's numbering is not a measurement of higher performance. Intel, Intel logo, Intel Inside, Intel Inside logo and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. L.P. Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries. ©2007 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.

On the Mark

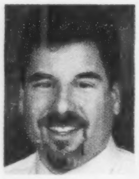
HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL



MATTHEW FAULKNER

Blue Skies for Open Source

WEATHER.COM, the online arm of Atlanta-based Weather Channel Interactive Inc., last month moved its final customer-facing, proprietary application to open source. Chief Technology Officer Dan Agronow doesn't say whether his staff broke a bottle of bubbly over the new MySQL app server that replaced an Oracle system, but you can tell he's happy. He excitedly lists other recent and impending tools for weather-obsessed consumers: mobile apps for the iPhone, gadgets for Vista and Google, and mashups combining Java, JavaScript, Flash and Microsoft Virtual Earth. And they're mostly built with and totally run on open-source technology.


Everything runs on open source, says Agronow of Weather.com.

Agronow credits his 70-odd IT staffers' skills at digging into open-source software and changing it in order to crank out application after application. It also helps that the staff is very good at what it does. Consider that Weather.com has no support contracts with any open-source suppliers, relying on online forums for free tech support. Agronow says the company's success with open source has made it "part of the consideration of an acquisition." A merger with an open-source operation, he says, is more likely to lead to "one plus one equals three" arithmetic during technology and business integration. Open source wasn't always a darling, of course. "There was a lot of risk and a lot of naysaying" when he helped steer Weather.com to open source about four years ago, Agronow recalls. Today, however, the IT climate in Weather.com's customer-facing data center is open and clear.

Bring Your Board Into the 21st Century

Low-tech white-collar workers are being weeded out of companies, even if they sit on the board of directors. So says Joe Ruck, CEO of BoardVantage Inc. in Menlo Park, Calif. He acknowledges that some board members still fit the stereotype of technically dim white males who have personal assistants print their e-mails. But, he argues, the increased spotlight on a board's performance and more treacherous compliance issues mean "the ceremonial aspect of a board's work is going away." Today, he says, CEOs seek board members who can stay up to the minute on news and information affecting the company, which requires much more tech savvy than it once did. One way for boards to stay current is with the BoardVantage portal. It's run by a company's general counsel to do things like schedule meetings and prepare the "board book" of documents necessary for each meeting. This week, BoardVantage is adding features such as digital certificates and the ability to send encrypted mail to BlackBerries and Treos to its SAS 70 Type II secure service. Pricing is implementation-specific.

Control Change, Improve IT

James Johnson is frustrated with CIOs. The CEO of Portland, Ore.-based Tripwire Inc., which develops configuration management and audit software, says he's mystified that CIOs aren't more aggressive with change control on IT systems. He cites numerous studies from the IT Process Institute in Eugene, Ore., that show that IT operations that follow strict guidelines to enforce change perform better than those with weak controls in areas such as delivering projects, detecting security breaches and server-to-admin ratio. Johnson says the objective data itself should have CIOs pushing better internal controls. "Instead, the tone at the top permits a 'cowboy culture' " when it comes to change, he says. He argues that CIOs should "grow up" and let go of their "hero" culture if they want their organizations to become consistently successful for the business. ■

95%

Success rate for changes to operations within IT departments that have strong process controls, says the IT Process Institute.

For all stories go to www.microsoft.com/reliable

Microsoft

The Highly Reliable Times

VOLUME 1 – ISSUE 5

Windows Server 2003

SWISS SEES RELIABILITY SOAR WITH WINDOWS SERVER, CHECKS RED HAT AT GATE

Tom Nagy for The Highly Reliable Times

THE SWISS INTERNATIONAL AIR LINES hub, located in Zurich, Switzerland.

Global Airline's Migration Yields 99.95% Reliability

By MICHAEL BETTENDORF

ZURICH—Swiss International Air Lines (SWISS), Switzerland's national airline, serves 70 destinations around the world with 6,500 employees in 105 branch offices. Today, 14% of SWISS's total ticket sales are processed through its online flight booking system at Swiss.com, with volume increasing by 30% per year. 24x7 operations are critical for this site because of its importance to the airline's business, but the original Red Hat Linux–based booking system was not meeting SWISS's requirements. So the airline began its search for a more reliable platform.

Reliability also drives market perception in the airline industry, according to SWISS CIO Frank Meyer. "In our business, having a plane in the maintenance hangar is not good for our image. It is the same for our online service—people expect it to be up and running," says Meyer.

After an intensive evaluation, Meyer and his team chose Windows Server® 2003 and .NET. Since migrating the online booking system to Windows Server, SWISS has seen reliability rise to 99.95%. In addition, while the previous Red Hat Linux–based system could only handle 250 concurrent users, the new system can now handle significantly more traffic than that. Meyer is confident about the effect of these changes: "Moving uptime to 99.95% while increasing performance to handle a greater number of users enables our team to easily handle the 30% growth we are seeing in our online sales."

For the full SWISS story, plus other case studies and independent research findings on the reliability of Windows Server versus Linux, visit microsoft.com/reliable

> *"Windows Server has given us the reliability to grow our online services and differentiate ourselves from the competition. With Linux, we didn't get the reliability or flexibility we needed."*
>
> *–Frank Meyer, CIO, SWISS*

STUDY: Side effects of reliability can include smiling, calmness

A study released today shows significant mood improvement in IT executives such as Frank Meyer (left) when they experience Windows Server reliability.

– Continued on Page B3

PHOTOS COURTESY OF INDIANA UNIVERSITY

■ THE GRILL

Michael McRobbie

Indiana University's president talks about **moving up from CIO, balancing open source** and **Microsoft,** and **enabling innovation.**

Dossier

Name: Michael McRobbie

Title: President

Organization: Indiana University system

Hometown: Born in Melbourne, Australia, but considers Canberra his hometown.

Renaissance man: Holds professorships in computer science, informatics, philosophy, information science and cognitive science.

Perks: After taking over as university president on July 1, McRobbie, who owns a home in Bloomington, got the use of two additional official residences.

Family: A remarried widower; he and his wife have six children.

Hobbies: Travel and reading (history and the arts)

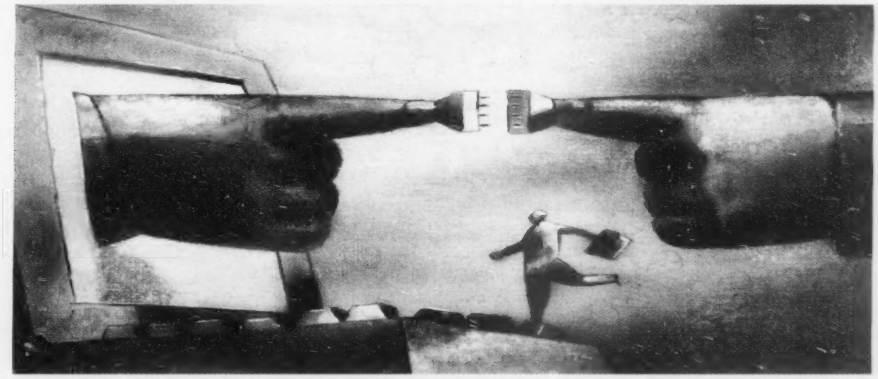
Long renowned as both a basketball powerhouse and a party school, Indiana University has in recent years begun to get noticed for its IT initiatives. Newsweek *called IU its "hottest big state school" in 2005, saying that features such as its I-Light broadband network were helping it attract out-of-state students. Envisioning I-Light and getting it built were among Michael McRobbie's many achievements as IU's CIO. Later, he helped to establish the first informatics department at a U.S. university. Those wins propelled a meteoric climb that culminated with his selection over 200 candidates in March as the new president of the nine-campus IU system. The 56-year-old Australian now oversees 100,000 students, 15,000 faculty members and a budget of $2.6 billion.*

How did you work your way up from an IT managerial role? I didn't jump from CIO straight to president. I went from CIO to vice president of research, to provost, to president. Though it was relatively quick [McRobbie was named CIO in 1997], it was also a fairly normal progression, as many college presidents are provosts first.

Continued on page 32

Innovations by **InterSystems**

Embed the ability to connect.



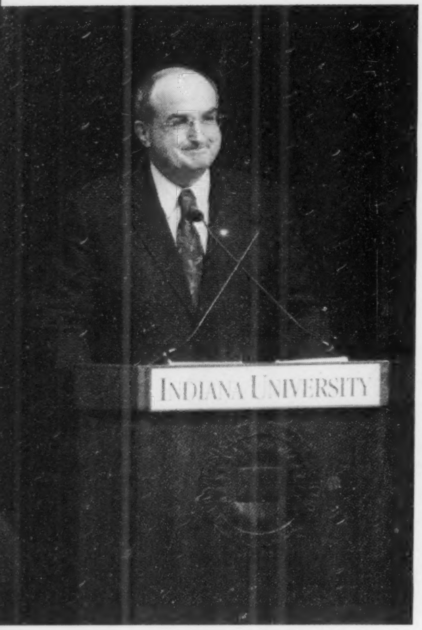
For software developers seeking competitive advantages, InterSystems Ensemble® offers an easy way to make applications more valuable. Embed our rapid integration platform in your applications, and they will easily connect with the existing systems of your customers and prospects. Plus, Ensemble enables you to enrich legacy applications with adaptable workflow, browser-based user interfaces, rules-based business processes, and other new features that users want – without rewriting. Embed our innovations, enrich your applications.

InterSystems
ENSEMBLE®

Make Applications More Valuable

See a demonstration of Ensemble at **InterSystems.com/Ensemble25A**

© 2007 InterSystems Corporation. All rights reserved. InterSystems Ensemble is a registered trademark of InterSystems Corporation. 10-07 EmbedEns25 CoWo



> **“If it’s a big institution and you’re the CIO, you have a pretty big span of control.**

Continued from page 30

Was there any bias against you for being an IT guy? An IT background alone is probably never enough for a top position. But it gives you a lot of important skills, such as being a strategist. If it’s a big institution and you’re the CIO, you have a pretty big span of control. That teaches you to think in ways that are helpful if you are aspiring for a position beyond CIO.

So your big leap was from CIO to VP of research? Yes, that was very important. Research is a very different world. It’s not centralized; it depends largely on the independent faculty member. My job was to help that faculty member get their proposals done more quickly, ensure that all the compliance issues are taken care of, that they can get seed money to start on proposals, etc.

What’s the IT connection there? IT is absolutely fundamental to research and education in every academic area — whether that be anthropology or zoology. This has been true for decades in the sciences; now it is just as valid in the humanities and the arts, too. You want IT to add to the intellectual productivity and educational capability of an institution. But you don’t want it to be obtrusive. You want it to be a tool that always works, like electricity or the telephone.

Do you think a university system that aspires to be in the first tier research-wise needs IT as cutting-edge as a Fortune 500 company? It is the university’s responsibility to provide a high-quality base level of infrastructure without being bleeding-edge. My philosophy is that base services such as networking or enterprise software licenses are a central responsibility. The life-cycle funding agreements we have in place, which are exactly comparable to what you find in Fortune 500 companies, should be organized and managed centrally. But the level you want to go beyond that is determined by the individual departments or schools.

Do you have any pet technologies that you are particularly keen on? I think open-source software will be very important. I also really think that providing as much connectivity as possible will enable innovation to flourish. Many IT innovations have come out of university environments from students who have a lot of bandwidth available to them. I know that it’s controversial to say this, and I’m well aware that file-sharing is a double-edged sword. But there’s pretty much a direct lineage from file-sharing to the iPod and now the iPhone.

We have to respect intellectual property. But the forces of technology are very difficult to harness; one needs to adjust business models to accommodate these forces.

To me, it is very instructive that the company that invented the iPod was Apple and not Sony. I think that’s a comment on the sort of the intellectual and technology environment of this country’s universities.

You say you’re interested in open source, but under your leadership, IU has been a cutting-edge adopter of Microsoft technologies. Oh sure, but I don’t think there’s a contradiction between the two. I think there are areas where the best products are the commercial products and other areas where there is still opportunity for innovation. Unless you’re a zealot, you understand that and you work within that framework.

What do you think about the preponderance of foreign students in U.S. computer science and engineering departments? I see us as competing for the best brains in the world — in this country, but also internationally. You simply cannot shut yourself off from the rest of the world. I think one can have concerns about the impact of a global marketplace. But it’s very difficult to turn back the clock.

What is your goal for IU’s informatics department? I’ve just appointed a new dean for informatics, which we merged with computer science. Informatics is really about the application of IT in a specific discipline, such as bio-informatics. It has its own intellectual discipline, its own software, its own problems. You can no longer take an IT person and hope to turn him into a bio-informatics expert overnight by boning up on a few books. You actually need to have a few years of training in both IT and biology. I want our informatics department clearly seen to be the very best in the nation at what it does.

What advice would you give to CIOs trying to make a leap similar to what you’ve done? IT is not an end in itself; it is a tool. Technology is very seductive, and one can easily get carried away with the latest whiz-bang technology or devices — and the ephemeral hopes for what these might be used for — and forget to ask the cold, hard questions such as, “What is this going to do for the bottom line of my organization?”

— Interview by **Eric Lai**

We have one thing to say to everyone who believes a SINGLE platform can't change EVERYTHING about data management.

SAY HELLO TO

SIMPANA™
software suite

Singular Information Management.™ Infinite Possibilites.

What can a single, ingeniously efficient, infinitely scalable data managment product change about the way information is protected, archived, managed, and accessed? In a word, *everything*. Say goodbye to shoehorning disparate products into inefficient, expensive patchwork "solutions." Simpana software is a *single* product with application modules for Data Protection, Archive, Replication, Resource Management and Search—all built from the ground up, on a single code base and platform. The Result? Singular efficiency, flexibility, and scalability other products can only dream about. To learn why Simpana software will change the way you think about data management, and about the groundbreaking new features and search capability in Simpana 7.0 software, visit **www.commvault.com** today.

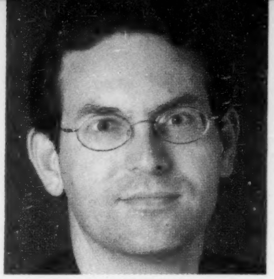
©1999-2007 CommVault Systems, Inc. All rights reserved. CommVault, the "CV" logo, CommVault Systems, Solving Forward, SIM, Singular Information Management, Simpana, CommVault Galaxy, and QiNetix are trademarks or registered trademarks of CommVault Systems, Inc. All other third party brands, products, service names, trademarks, or registered service marks are the property of and used to identify the products or services of their respective owners. All specifications are subject to change without notice.

- DATA PROTECTION
- ARCHIVE
- REPLICATION
- RESOURCE MANAGEMENT
- SEARCH

commvault
solving forward™

OPINION

John D. Halamka



An About-face on Flexible Schedules

IN MY 10 YEARS AS A CIO, I've strongly believed that productivity is best when everyone works in close physical proximity. That gives you the benefit of the "over the cubicle" effect of being able to brainstorm ad hoc, respond to urgent issues as a group and build trust within the team.

But the world has changed, and new factors have to be considered. First, the commuting needed to bring everyone together has become burdensome and expensive. Commutes can now take two hours or more, and gas prices are causing hardship. At the same time, environmental consciousness about the carbon impact of those long commutes is on the rise. Second, Internet connections are becoming faster, more reliable and cheaper. I have a 20Mbit/sec. fiber connection in my basement for $40 a month.

We also have many more means of communication: e-mail, instant messaging, blogs, wikis, webconferencing, videoconferencing. Face-to-face meetings that take weeks to schedule are inadequate for the pace of IT change.

How should a CIO react to this changing landscape? I believe we have to explore the entire spectrum of flexible work arrangements.

Are in-person meetings really necessary? I find that an in-person kick-off meeting to initiate a project works best. Collaborators can introduce themselves and build a common framework for working together. Thereafter, conference calls, online collaboration tools and e-mail are sufficient.

Is 8 a.m. to 5 p.m. the best way to staff an office? Not if it implies hours on the road each way. If working from 10 a.m. to 7 p.m. cuts commutes by an hour each way, it's likely that productivity and staff satisfaction will rise.

Is being in the office even necessary? For some jobs, the interruptions of the office may actually reduce productivity. Some structured time in a home office may be preferable.

Things have changed, so new factors must be considered.

Of course, there are issues. Home offices need infrastructure support — networks, desktops and connections to the corporate phone system. Figuring out the best way to service hundreds of remote locations will require planning and pilots. The technology may not need to be complicated, though. Videoconferencing isn't always necessary, for example, since phone calls and Web-based remote presentation tools are very efficient.

Accountability is key, so you may need management tools to monitor specific project milestones and productivity goals. But you may be pleasantly surprised. In a recent pilot in Massachusetts, a health insurer found that productivity for 200 staffers working from home rose 20% — and only two staffers had performance problems.

Equity is another problem. Some staffers, such as those doing direct desktop service or training, need to be on-site. But you can still offer some flexibility, letting them put in four 10-hour days, say, or giving them every other Friday off.

Security and privacy are concerns that loom large for me, since my IT organization is part of a large health care provider. If protected health data is to be accessible in employees' homes, we will need to investigate biometric devices, re-examine application time-outs, strengthen surveillance of audit logs and ensure end-to-end security from data center to the home.

Over the next year, I'll be piloting the technologies, policies and business processes needed to manage IT professionals in flexible work arrangements. I expect that retention, productivity and employee satisfaction will rise as the time spent commuting falls. I'll keep you updated on the progress — from my home office. ■

John D. Halamka *is CIO at CareGroup Healthcare System, CIO and associate dean for educational technology at Harvard Medical School, chairman of the New England Health Electronic Data Interchange Network, CIO of the Harvard Clinical Research Institute and a practicing emergency physician. You can contact him at jhalamka@caregroup.harvard.edu.*

You strive to exceed your
client's expectations. Start by choosing
the Network that exceeds yours.

Verizon Wireless, America's most reliable wireless broadband network, works with you and your existing systems to help you give your clients expert service.

- Conduct business wirelessly at broadband speeds on devices like the BlackBerry 7130e,™ the Motorola Q,™ the Palm® Treo 700w™ or from your laptop.
- Access and update your schedule and contacts, send emails and use company applications—all directly from your smartphone.
- Work remotely from your laptop and connect to your company intranet to be able to easily send large files.
- Improve communications between the office and clientele on the go with simple, reliable wireless solutions from Verizon Wireless.

Visit verizonwireless.com/business or call 1.800.VZW.4 BIZ
(899.4249)

verizonwireless

Wireless broadband network is available in 242 major metropolitan areas in the U.S. Offers and coverage not available everywhere. Network details & coverage maps at verizonwireless.com. America's most reliable wireless network claim based on fewest aggregate blocked and dropped connections. See verizonwireless.com/bestnetwork for details. © 2007 Verizon Wireless.

GLOBAL ERP

Is it worth the angst? Three multinationals say yes. **By Thomas Hoffman**

Colorcon CIO PERRY COZZONE says his team emphasized that moving to a single ERP instance would globalize businesses once confined to a single region.

PHOTO BY BILL CRAMER

SINCE COLORCON INC. consolidated all of its global offices and seven manufacturing sites onto one ERP system in 2001, the benefits have been indisputable. The specialty chemicals manufacturer has increased its annual inventory turns by 40%, closes its books each quarter more than 50% faster than it once did and has improved its production lead times. "It was a significant improvement," says CIO Perry Cozzone.

But getting to a single, global instance of Oracle Corp.'s 11.5.10 E-Business Suite has also been fraught with challenges for the West Point, Pa.-based company. Those included cleansing and verifying data from legacy systems, standardizing business processes globally and getting buy-in from business leaders in locales as disparate as Brazil, Singapore and the U.K.

"It was hard work," says Cozzone, who oversaw the final stages of the system implementation.

Transitioning to a single, global instance of an ERP system is a heady challenge for large and midsize multinationals alike. "It's a real struggle for many companies to have consistency around their business processes" because of differences in regional business requirements, says Rob Karel, an analyst at Forrester Research Inc.

But companies that have achieved a single instance say it's worth the struggle to streamline financial reporting and increase the visibility of operations around the world, because doing so allows executives to make decisions faster.

CHANGE MANAGEMENT

For many organizations, the toughest challenge in moving to one ERP system is change management. "The organization has to reach consensus on business processes," says Jim Shepherd, an analyst at AMR Research Inc. in Boston. "That's far and away the most challenging aspect of these projects."

Goss International Corp. began moving to one instance of SAP AG's ERP system in 2002 in an effort to consolidate its global financial reporting, close its books faster and have greater visibility into operations such as manufacturing. Following its 2004 acquisition of Heidelberg Web Systems, Goss implemented the SAP system in its Bolling Brook, Ill., headquarters in 2005 and at facilities in the U.K. and Shanghai earlier this year.

Because Goss had stuck to SAP's industrial machinery and components industry template, there was a 95% correlation among its sites in how the SAP software was preconfigured and how the company ran its operations, says

The Tough Stuff

Companies that consolidate to a single global ERP system face many human and technical challenges, including these:

- Managing change, including standardizing business processes
- Communicating project goals to constituents from different cultures
- Gaining business unit buy-in
- Achieving data integrity
- Retiring dozens or even hundreds of discrete systems
- Meeting regional legal and regulatory requirements
- Achieving high system availability through high-bandwidth connections
- Maintaining business as usual during the transition
- Providing consistent global technical support

—THOMAS HOFFMAN

Mike Masters, director of global applications and solutions at the printing press manufacturer.

Still, the project team had to work through regional differences. For instance, the French government requires that businesses report their inventory figures as a moving average. So the ERP project team had to adjust the SAP general ledger system used by its French unit so it could report one set of figures to the French government and a standard set to the company.

The experience at Millipore Corp. was similar. "The toughest part of all of this was implementing a change management policy," says Tom Roy, manager of application services at the Billerica, Mass.-based life science products and services provider.

The changes associated with Millipore's consolidated ERP effort started in 1999, when the company established central, round-the-clock support for Oracle ERP users in 32 countries. It was difficult for workers in the U.S. to replicate the IT support service that employees in Japan were receiving locally, says Roy, so "we had to put different business processes in place."

Millipore placated many users by assigning three database administrators on rotational schedules to handle sup-

> **The toughest part of all of this was implementing a change management policy.**
> **TOM ROY,** MANAGER OF APPLICATION SERVICES, MILLIPORE CORP.

port calls from its international offices. One of the biggest pieces of the change management puzzle is gaining buy-in from local business leaders accustomed to suites tailor-made to support their unique business processes, says Forrester analyst Paul Hamerman. "There's often reluctance among business units to give up the systems they use," he says.

To work through those issues, the Colorcon project team had two forums for business leaders to advocate for their organizations' needs. Business process owners participated in regular discussions with the project team to make sure their requirements were being met. And director-level executives were able to track the project through the project management office and add their input. Cozzone's team also gained acceptance by reminding business leaders that the change was going to globalize businesses once confined to operating in a single country.

DATA INTEGRITY

The most common technical challenge that project teams face is verifying the integrity of legacy data and moving it to the ERP environment. "One of the lessons learned is that you can never spend enough time on ensuring data quality," says Cozzone.

Early in Colorcon's project, when there were questions about the quality of a set of data, team members and executives didn't always agree on what needed to be done. "There was inconsistency about how to measure [quality] and manage it," says Cozzone.

So the project team developed a data-quality dashboard to illustrate to business leaders why compromised data needed to be fixed before being entered into the Oracle environment. The dashboard demonstrates, for instance, how poor-quality customer contact information could lead to an increase in erroneous orders. The dashboard includes steps that business users can take to correct faulty data, and it quantifies monthly business improvements achieved by reducing bad data.

Each of the companies also had to work through minor issues in retiring legacy systems and so-called "ghost" systems — those used in various business units but unknown to corporate IT.

"We're not a multibillion-dollar company, but we still had ghost systems," says Cozzone. "We made these a high priority and got rid of them quickly."

At Goss, when data from a legacy system was migrated to the SAP environment, the system would then be retired, explains Masters. Data from reporting applications that were needed and supported locally was retained and formatted for the SAP environment, but it didn't become part of the central transactional system, he adds.

Millipore encountered relatively few data-integrity problems, since most of its operations were already running on Oracle when it transitioned to a single global instance of the ERP system in 1999, says Roy. But it did have to make big investments in high-speed bandwidth connections to help far-flung offices connect more easily to the centralized Oracle system in the U.S.

"You have to invest significantly to get some big [network] pipes," says Roy. "Before this move, some of our offices were accessing a computer in their own data room. Now, they're connecting with a system that's 5,000 or 6,000 miles away."

But it's all been worth it for Millipore. Like Colorcon, the company is now closing its books faster than before and has a much better global view of its inventory and financial data. "The only way we had that view before was either to query each database online separately or to run and print reports from each system," says Roy.

Goss has gone from closing its financial books in seven days to five days, says Masters. But for it, too, the global view was the big payoff. "The single biggest value we've received from the single instance is increased visibility across the board," says Goss CIO Bill Rogers. "The bill of materials is visible; manufacturing orders are visible; financial reporting is visible. This all leads to more timely and more effective decision-making." ■

Making the Right Choice

Single-instance ERP isn't for everybody. Here are the key characteristics of companies that tend to choose global ERP and of those that use regional systems.

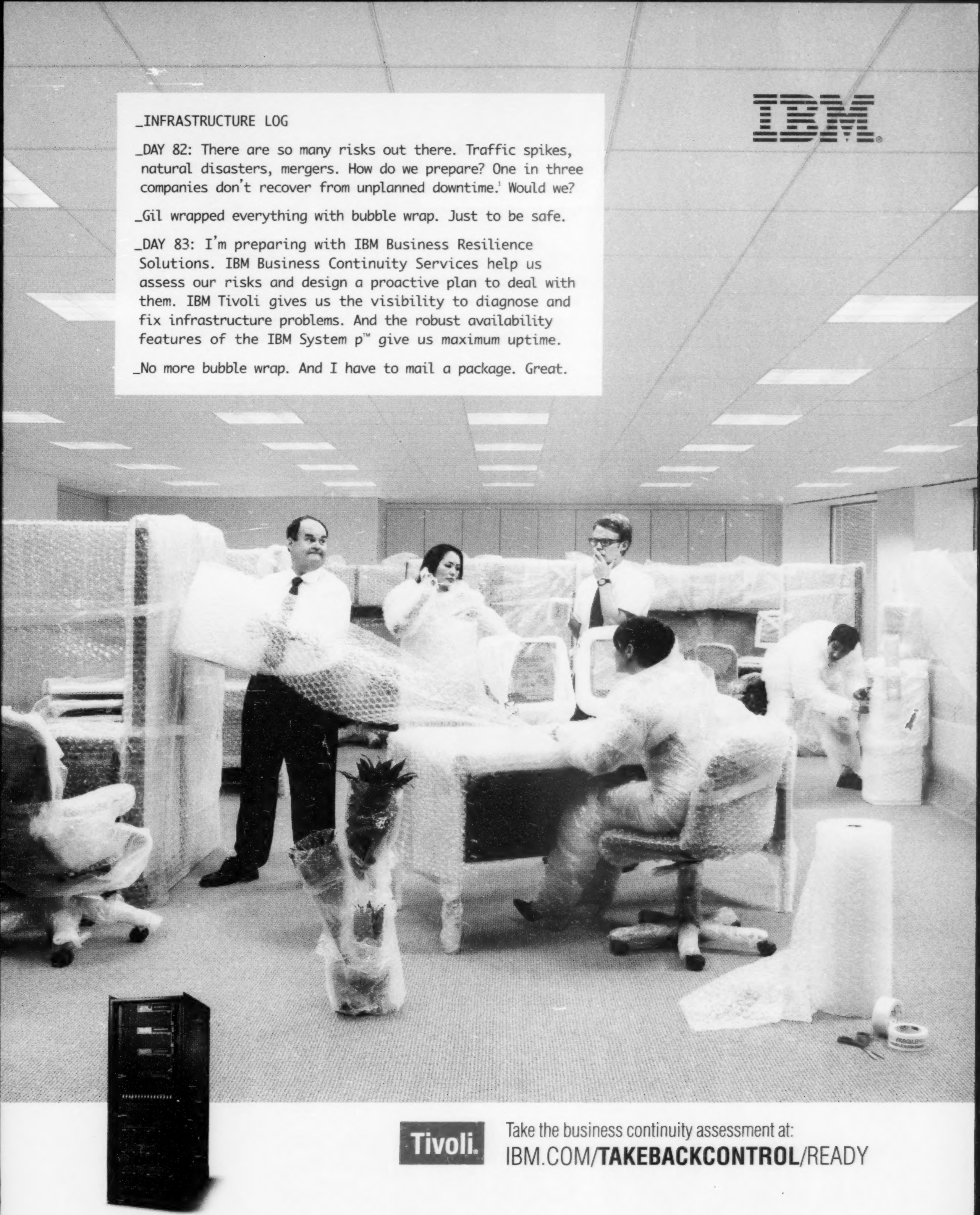
GLOBAL ERP

- Multinationals seeking to centralize financial reporting and close their monthly or quarterly financials faster.
- Companies looking to minimize the variety of financial controls in place to simplify regulatory compliance activities.
- Corporations that stand to gain operational efficiencies by centralizing management and control of operational procedures, such as order management, materials handling and inventory control.
- Organizations seeking to maintain common business processes across various divisions and geographies.

REGIONAL ERP

- Corporations that are highly distributed or operate as collections of regional businesses.
- Companies that need customized systems to meet unique business requirements in particular markets.
- Multinationals subject to various local rules and regulations that require reporting of financials or operational data in formats different from those used by the rest of the company.
- Far-flung companies whose regional units may be subject to infrastructure instability, making it difficult to maintain consistent high-speed connections to a host system located across the world.

– THOMAS HOFFMAN



_INFRASTRUCTURE LOG

_DAY 82: There are so many risks out there. Traffic spikes, natural disasters, mergers. How do we prepare? One in three companies don't recover from unplanned downtime.[1] Would we?

_Gil wrapped everything with bubble wrap. Just to be safe.

_DAY 83: I'm preparing with IBM Business Resilience Solutions. IBM Business Continuity Services help us assess our risks and design a proactive plan to deal with them. IBM Tivoli gives us the visibility to diagnose and fix infrastructure problems. And the robust availability features of the IBM System p™ give us maximum uptime.

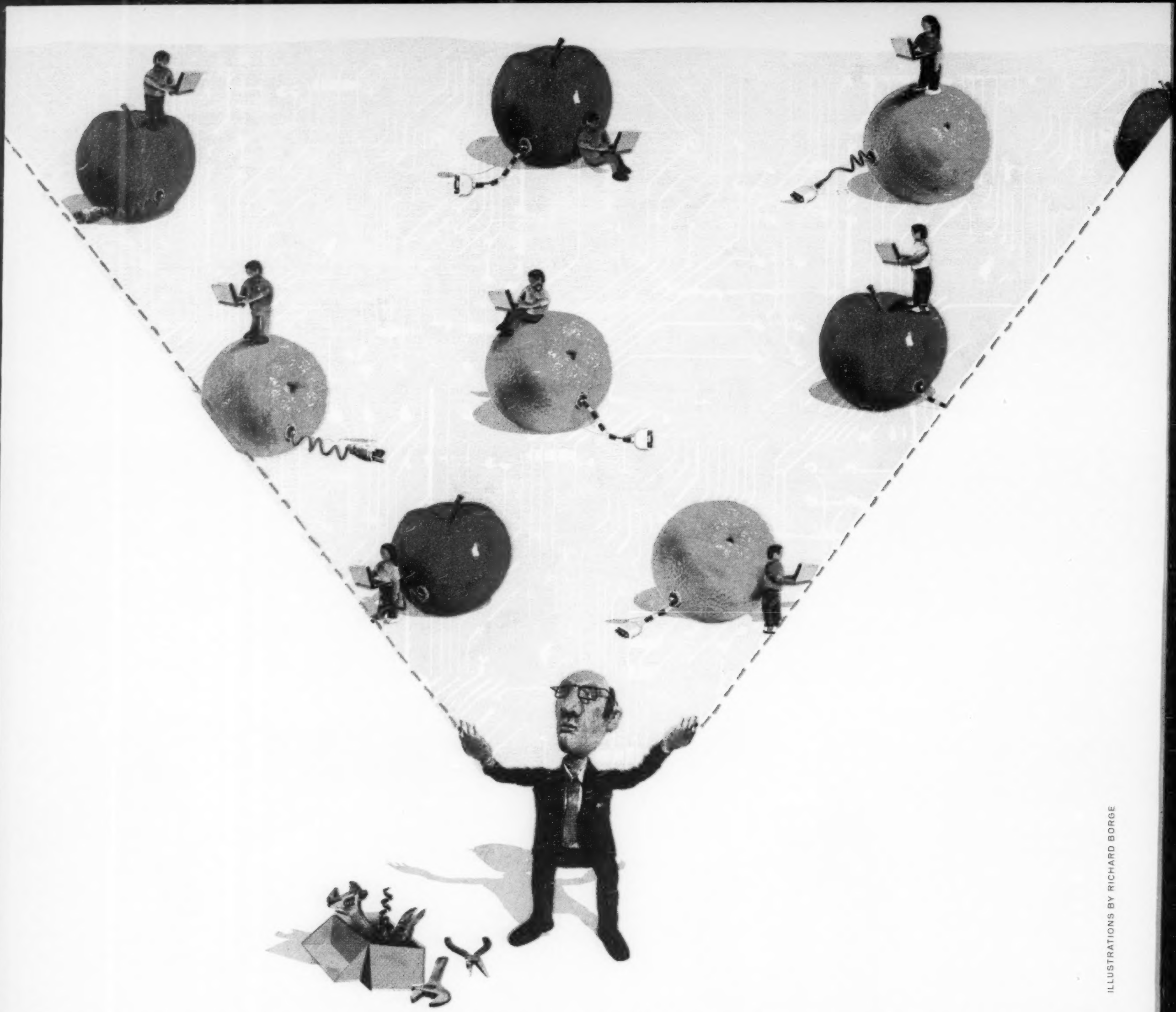
_No more bubble wrap. And I have to mail a package. Great.

IBM

Tivoli.

Take the business continuity assessment at:
IBM.COM/**TAKEBACKCONTROL**/READY

[1] Source: "Business Continuity Unwrapped," Continuity Central, 2006. www.continuitycentral.com/feature0358.htm. IBM, the IBM logo, System p, Take Back Control and Tivoli are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. ©2007 IBM Corporation. All rights reserved.

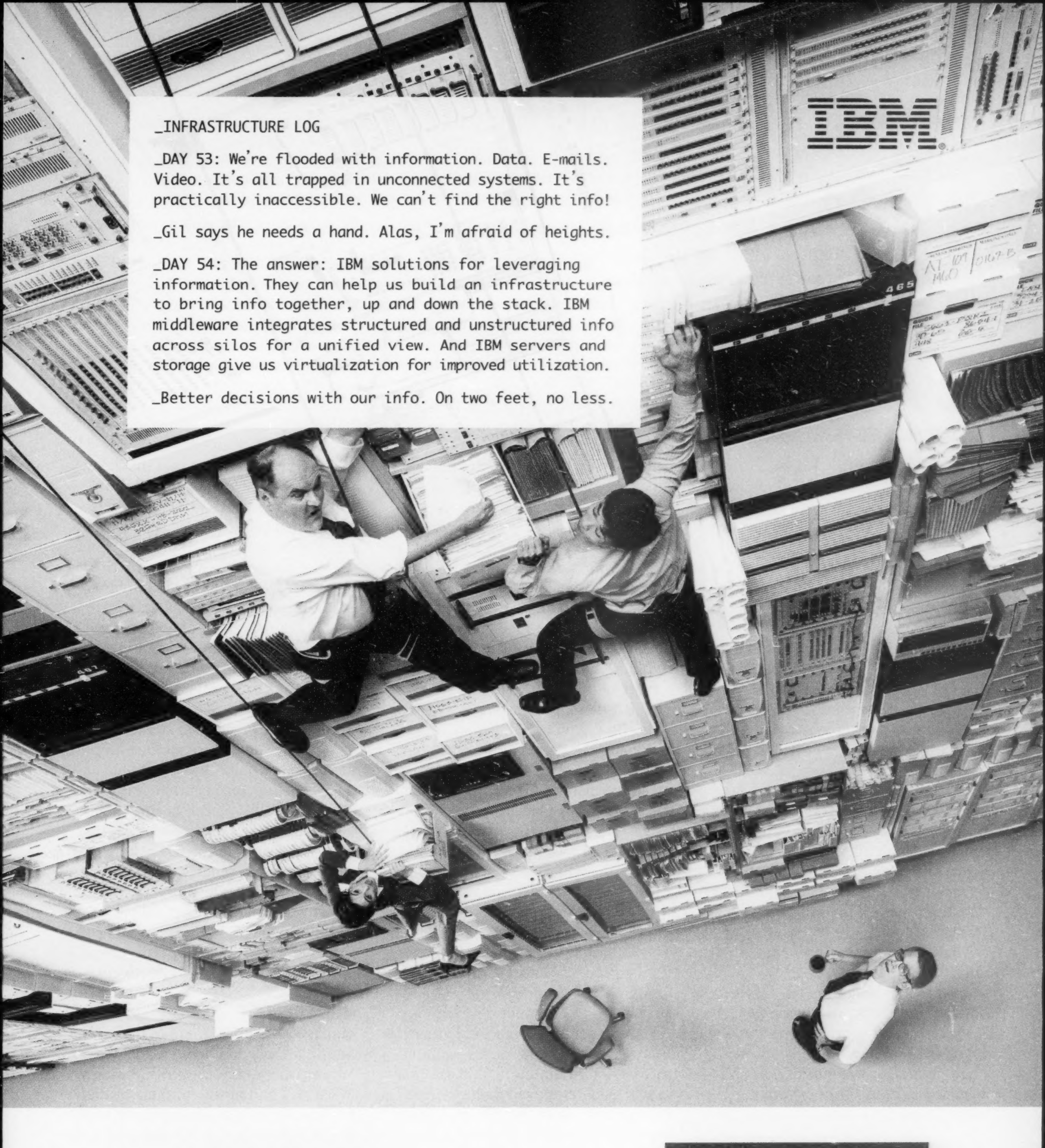


ILLUSTRATIONS BY RICHARD BORGE

Here's the rundown on some **tools to help you support Mac** and **PC users** at the same time. **By Ryan Faas**

Managing Apples And Oranges

Continued on page 42



_INFRASTRUCTURE LOG

_DAY 53: We're flooded with information. Data. E-mails. Video. It's all trapped in unconnected systems. It's practically inaccessible. We can't find the right info!

_Gil says he needs a hand. Alas, I'm afraid of heights.

_DAY 54: The answer: IBM solutions for leveraging information. They can help us build an infrastructure to bring info together, up and down the stack. IBM middleware integrates structured and unstructured info across silos for a unified view. And IBM servers and storage give us virtualization for improved utilization.

_Better decisions with our info. On two feet, no less.

IBM

Information Management

Download the leveraging information white paper at:
IBM.COM/**TAKEBACKCONTROL**/INFO

IBM, the IBM logo and Take Back Control are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. ©2007 IBM Corporation. All rights reserved.

In large computing environments, administrators can waste a lot of time going to individual users' desks and waiting as any new or updated software is loading.

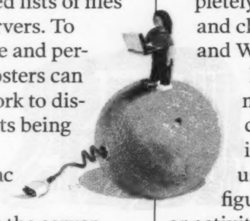
A number of software packages offer remote troubleshooting and deployment options, but if you've got a mix of Macintosh and Windows computers, a single tool that supports all users and workstations, regardless of platform, is key.

The products discussed here all offer some level of cross-platform support and can help you efficiently manage the clients in your network.

FILEWAVE

FileWave Inc. has been developing its flagship product for Mac networks for many years. FileWave operates in a client/server structure in which administrators define groups of individual clients and file sets that make up application packages as they exist in the file system after an application has been installed. File sets are associated with groups to establish a list of applications that are available to those computers.

At regular intervals, each FileWave client queries the appropriate server or servers to determine whether its configuration has been updated. If the configuration has been changed, the client downloads updated lists of files from the appropriate servers. To maximize fault tolerance and performance, FileWave Boosters can be installed in the network to distribute the load of file sets being transferred to clients.



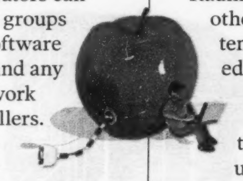
FileWave supports Mac OS X and Windows NT, 2000 and XP clients, but the server components work only for the Mac.

Particularly useful features include FileWave's seamless integration with client operating systems and its ability to generate reports about which software is installed on which machines.

NETOCTOPUS

Netopia Inc.'s NetOctopus Enterprise System Manager has also been available for quite some time. Its remote-deployment feature can be used to roll out applications, updates and collections of files, and it has an asset management tool and configuration system. It supports all common installer package formats for Mac OS X and Windows. It also includes a copy of Installer Vise for situations where you need to make your own install package to insert individual items into specific locations of the file system.

NetOctopus administrators can organize computers into groups that are then assigned software and file configurations, and any servers within your network can be used to host installers. This allows you to build load-balancing into your management plan while leveraging existing technology. NetOctopus is completely cross-platform; its server and client elements can run on Mac and Windows machines.



NetOctopus' asset management tool is designed to help control inventory and licensing, and it can track computer usage patterns. It can be configured to detect disallowed files or activity on a workstation, as well as changes to a computer's hardware. Although not as full-featured as Apple Inc.'s Managed Preferences Architecture or Active Directory's Group Policy model, NetOctopus includes a client-configuration tool that allows you to remotely adjust one or more system settings across multiple computers.

LANREV

This is a cross-platform deployment tool, and both its server and client software can be installed on either Mac or Windows machines. Like other products, LANrev allows you to group computers by type, location or function and then assign items to be deployed and maintained based on those groups. But it also offers the ability to integrate administration with Active Directory, allowing you to use existing organizational units to assign deployment roles. In addition, it lets you use Active Directory accounts to delegate deployment-administration rights.

Other features include a tool for creating installer packages using system snapshots, asset management tools and advanced license-management tools.

RADMIND

Radmind is an open-source deployment and management tool that has been ported to Unix, Linux, Mac OS X and Windows. It's a client/server system that relies on load sets, which are snapshots of a workstation configuration. Changes to a load set are then propagated out to managed clients.

Radmind goes a step further than other straight deployment systems. Each time a client is updated, any files that were not part of the specified configuration are deleted or returned to their prescribed state. To allow user documents to be retained, Radmind supports two types of load sets: a positive load set that defines the files that will be placed or retained on the client, and a negative load set that defines portions of the file system that will be left unmanaged.

Radmind lacks the more advanced features of some commercial packages, and it can be cumbersome to set up. As a system with a low-cost deployment, however, it can be quite effective.

MANAGESOFT

ManageSoft Deployment Manager is a multiplatform deployment and distribution system that supports Windows, Mac OS X and most Unix/Linux distributions, though its management tools are Windows-based. It integrates with Active Directory, allowing you to use existing organizational units to set deployment and distribution policies.

ManageSoft Corp. relies on a distributed computing model, enabling any server in a network to act as a distribution node for files and applications that

Continued on page 44

_INFRASTRUCTURE LOG

_DAY 89: Our power and cooling costs are out of control. We spend the bulk of our IT budget just keeping the data center cool. I told Gil we need to go green in a big way.

_DAY 91: Gil took us green...kelly green, to be exact.

_DAY 93: You don't go green with paint. You go green with IBM Cool Blue™ technology and energy management services. Advanced server and storage virtualization can help consolidate our boxes to lower energy usage. And the new IBM POWER6™ systems help us use less energy doing the same amount of work.[1]

_Our data center will be green now. And painted white.

IBM

Learn how to make your data center more efficient:
IBM.COM/**TAKEBACKCONTROL**/GREEN

[1] Requires Advanced Power Virtualization, which is optional and available at an additional charge. IBM, the IBM logo, Cool Blue, POWER6 and Take Back Control are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. ©2007 IBM Corporation. All rights reserved.

Continued from page 42

are deployed to clients. Its software also supports peer-to-peer distribution of files throughout a network. This can be helpful in smaller organizations that have only one or two servers at each work site and that can't afford to dedicate server resources to deployments and software updates. It also integrates well with the company's other products, which include asset and license management systems, security-update management tools, and Windows deployment automation systems.

LANDESK

LANDesk Software Inc.'s LANDesk Management Suite provides deployment, remote troubleshooting, and asset and license management capabilities for Mac OS X, Windows and Linux computers. It can generate detailed reports about clients and is even capable of notifying administrators when changes are made to systems or when media files in formats including MP3 are present on a computer.

LANDesk's deployment tools are designed for both traditional unicast and targeted multicast environments. Their ability to handle the latter is particularly helpful during large updates of numerous clients. They also provide a range of scheduling and automation options for deployments. The suite supports peer-to-peer distribution of files, as well as a more traditional server-based approach. It can handle a range of package formats and includes tools for creating custom packages.

As part of its software-distribution model, LANDesk supports a number of Mac OS X technologies, including shell scripts and Automator workflows. It also supports disk image-based deployments and offers a unique remote-image feature that allows administrators to create disk images based on remote workstations. (Most disk-imaging tools must be run locally.)

Although LANDesk's management console is not available as a Mac OS X application, the company offers a Web-based console for Mac administrators. LANDesk Management Suite also integrates very well with a directory services infrastructure. This allows you to use Active Directory — or an alternate Lightweight Directory Access Protocol technology, such as Novell NDS/eDirectory — to create deployment policies based on organizational units and to assign access rights for distribution and remote troubleshooting.

Unlike LANDesk's other remote-troubleshooting systems, the remote-troubleshooting components of this suite offer cross-platform support. They integrate with the suite's inventory database and asset-control features as well as with directory services.

The suite can log all remote-control activities. It's designed to integrate with existing help desk ticket systems, and it offers secure access, integrated chat and file-transfer capabilities, and the ability to shut down and reboot computers remotely.

TIMBUKTU

Netopia's Timbuktu Pro is among the oldest remote-troubleshooting tools. The software supports Windows and Mac client and management software. It also integrates with Skype for voice-over-IP chat while users are providing remote support or collaborating. Timbuktu is available in a range of packages, including one that offers server-based installation and management of the Windows client to networked PCs. Another provides a Web-based turnkey system, known as TimuktuToGo, a good option for consulting firms.

NTRSUPPORT

NTRSupport is a Windows tool that can be used to remotely control Windows or Mac OS X computers. Users can access NTRglobal's offering via a Web site or an e-mail link. When a client initiates a request, the request is funneled through a server to a support staffer who can initiate a remote-control session of the client's computer.

This approach differs from that of many other products in that it doesn't require an agent to be preinstalled on the remote computer. Software developers, service providers and consulting firms may find it helpful. Support staffers can communicate with users via text chat, voice over IP and videoconference, and they can respond to up to five requests at a time. ■

Faas *is a freelance writer and technology consultant. Contact him at ryan@ryanfaas.com.*

More Information

Product: FileWave
Contact: FileWave Inc.
San Francisco
(888) FileWave
www.filewave.com

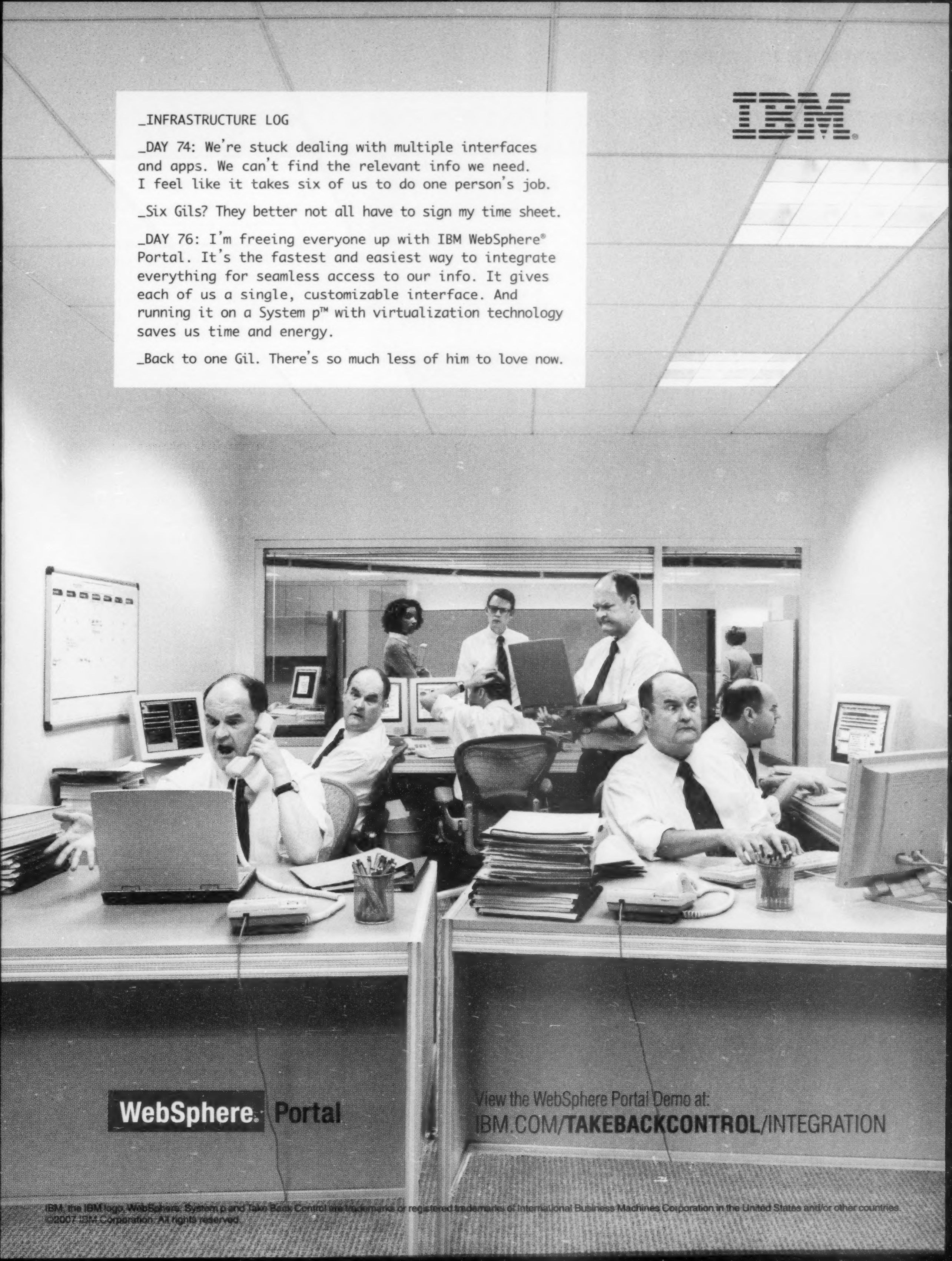
Product: LANDesk Management Suite
Contact: LANDesk Software Inc.
South Jordan, Utah
(800) 982-2130
www.landesk.com

Product: LANrev
Contact: LANrev LP
Addison, Texas
(214) 459-0136
www.lanrev.com

Product: ManageSoft Deployment Manager
Contact: ManageSoft Corp.
Boston
(800) 441-4330
www.managesoft.com

Products: NetOctopus and Timbuktu
Contact: Netopia Inc.
(Acquired by Motorola Inc., Feb. 2007)
Emeryville, Calif.
(510) 420-7400
www.netopia.com

Product: Radmind
Contact: Radmind.com



_INFRASTRUCTURE LOG

_DAY 74: We're stuck dealing with multiple interfaces and apps. We can't find the relevant info we need. I feel like it takes six of us to do one person's job.

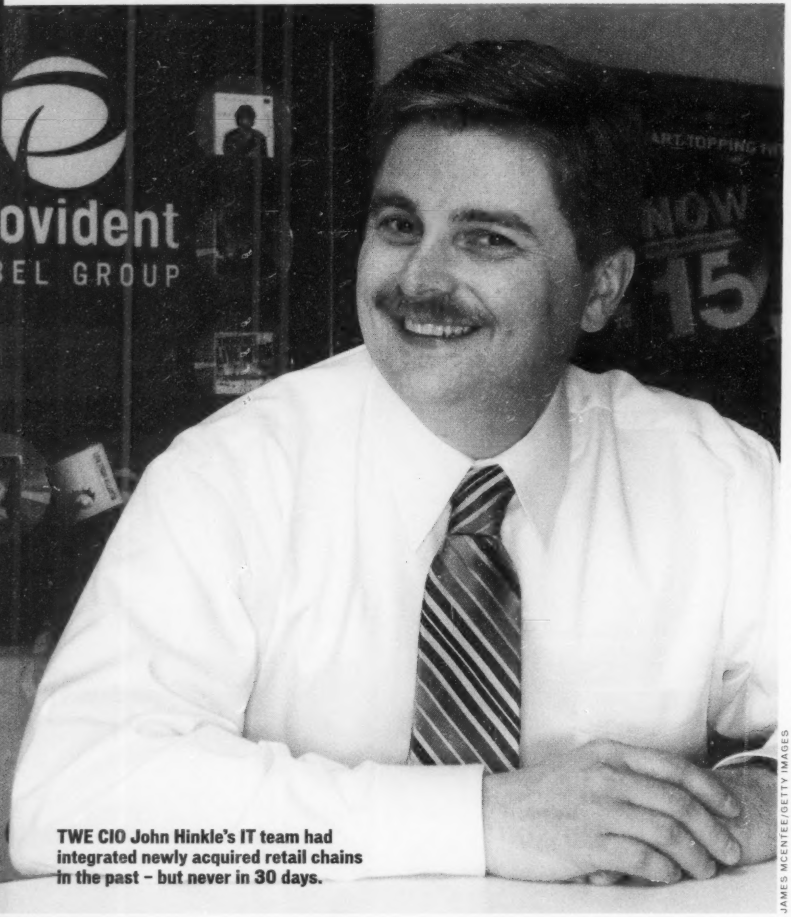
_Six Gils? They better not all have to sign my time sheet.

_DAY 76: I'm freeing everyone up with IBM WebSphere® Portal. It's the fastest and easiest way to integrate everything for seamless access to our info. It gives each of us a single, customizable interface. And running it on a System p™ with virtualization technology saves us time and energy.

_Back to one Gil. There's so much less of him to love now.

View the WebSphere Portal Demo at:
IBM.COM/**TAKEBACKCONTROL**/INTEGRATION

IBM, the IBM logo, WebSphere, System p and Take Back Control are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries.
©2007 IBM Corporation. All rights reserved.



TWE CIO John Hinkle's IT team had integrated newly acquired retail chains in the past – but never in 30 days.

JAMES MCENTEE/GETTY IMAGES

Systems In Concert

Trans World Entertainment's IT team had just 30 days to integrate 335 Musicland stores with its back-end systems. Here's how they did it.

By Robert L. Mitchell

ON MARCH 1, as Trans World Entertainment Corp. prepared to acquire Musicland, TWE's CIO, John Hinkle, sat in on a due diligence meeting with the management of the bankrupt music store chain. His challenge: Integrate the antiquated point-of-sale (POS) systems in 335 stores owned by Musicland with the finance and replenishment systems that served TWE's existing 800-store business — and do it before the deal closed at the end of the month. As if that weren't enough, TWE management wanted all of the Musicland stores across the country to be networked and running on TWE's own POS system and all employees trained within 90 days.

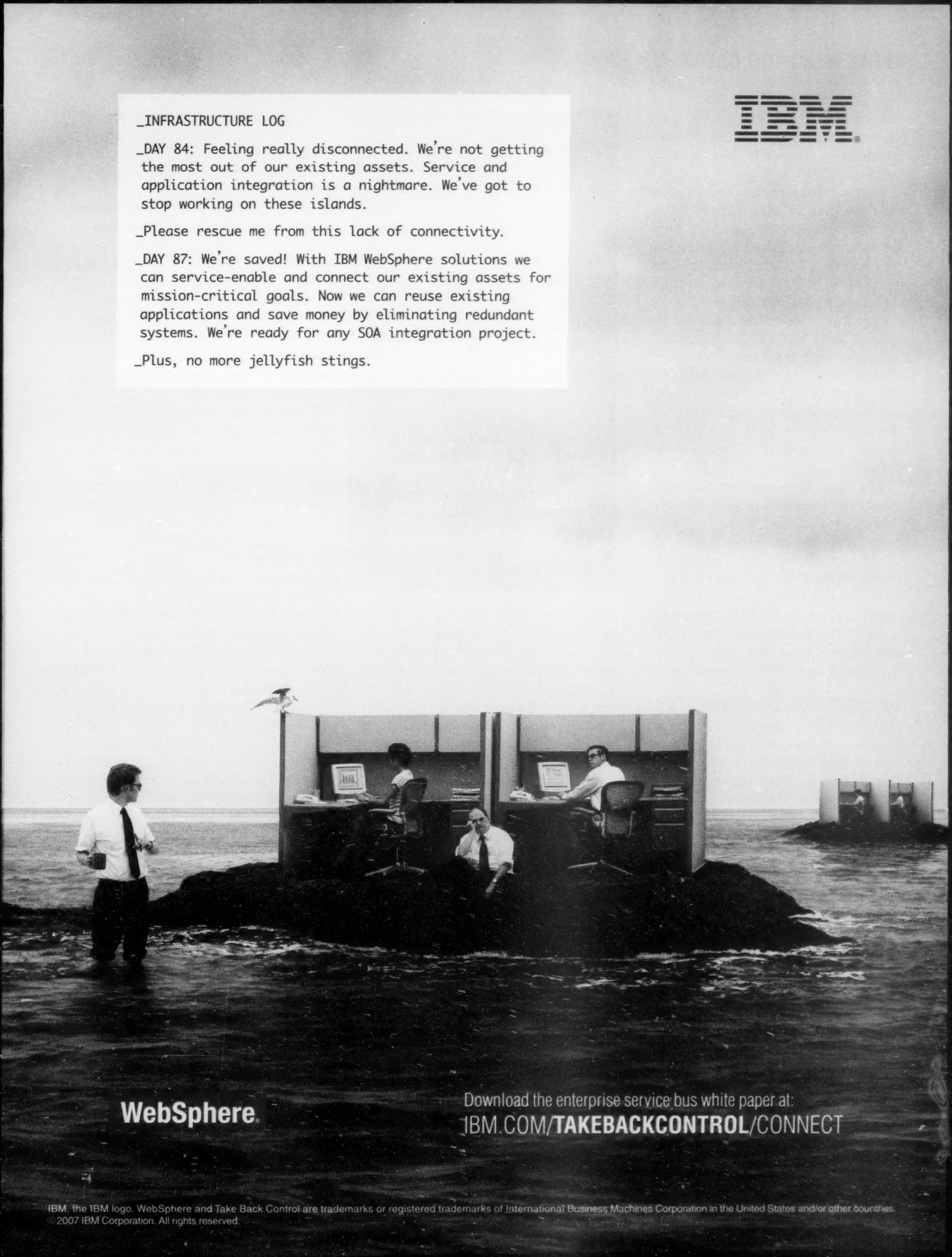
Hinkle's team had been down this road before, having successfully integrated five other chains, ranging in size from 30 stores to 400 stores, in the past 10 years. But the 30-day window was a first. The fact that management even considered it says much about IT leadership, says Alex Cullen, an analyst at Forrester Research Inc. in Cambridge, Mass. "It shows that the executive team had a lot of confidence in the CIO."

TWE had few options. "That was all driven by Sarbanes-Oxley," says controller John Anderson, noting that Musicland didn't have any documented controls for regulatory compliance in place. "We would have had to hire an outside audit firm, and that would have been very costly." The incremental investment required to move quickly was "not insignificant," Hinkle adds, but it paid for itself in the first month.

Hinkle created several project teams to handle the transition. They included representatives of TWE's financial, merchandising, and planning and allocation operations. Jim Razzano, director of software development, worked with Musicland's IT staff to map data from Musicland's mainframe to Albany, N.Y.-based TWE's back-end systems. Having a standardized data interface made the job easier.

"By mapping data into a proven interface, we greatly reduced the time for testing and validation for processes," Razzano says. But developers still had to write some one-time load routines

Continued on page 48

_INFRASTRUCTURE LOG

_DAY 84: Feeling really disconnected. We're not getting the most out of our existing assets. Service and application integration is a nightmare. We've got to stop working on these islands.

_Please rescue me from this lack of connectivity.

_DAY 87: We're saved! With IBM WebSphere solutions we can service-enable and connect our existing assets for mission-critical goals. Now we can reuse existing applications and save money by eliminating redundant systems. We're ready for any SOA integration project.

_Plus, no more jellyfish stings.

IBM®

WebSphere.

Download the enterprise service bus white paper at:
IBM.COM/**TAKEBACKCONTROL**/CONNECT

IBM, the IBM logo, WebSphere and Take Back Control are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries.
© 2007 IBM Corporation. All rights reserved.

Continued from page 46

where data from the Musicland system couldn't be delivered in the proper format.

Transaction codes had to be mapped between financial systems, and getting the replenishment systems to service the new stores required inputting store configurations, capacities and inventory levels into TWE's system, including all of the stock-keeping unit codes for every product sold in Musicland stores.

All of Musicland's eight-digit SKUs had to be mapped to the 12-character universal product code format that TWE used. With 20,000 to 30,000 SKUs per store to deal with and 1.5 million SKUs in TWE's product database, "it was like an [extract, transform and load] project on a grand scale," Hinkle says.

The teams worked seven days a week until the deadline. The cutover took place on a Monday, when TWE began receiving daily batch uploads of store data from Musicland's mainframe. "It took two or three days to work the kinks out," says Hinkle, but the systems were tracking inventory, replenishing the acquired stores and generating reports that included the Musicland properties by week's end.

PROJECT MOVES TO STORE LEVEL

With the back-end systems running smoothly, Hinkle focused on getting the stores online and transitioned to new POS systems. Director of IT Operations Roy Simmons arranged to beef up the back-end corporate systems to handle the extra load and was already working on installing in-store networks and broadband connectivity at each location. "The systems [in Musicland's stores] were so old that they had a modem on every register for credit card checks," he says.

Working with NCR Corp. and POS software supplier Epicor Software Corp. to get all of the equipment staged and shipped to the stores on short notice was the biggest challenge, but the longest delays came from waiting for the installation of DSL or backup frame-relay services, which went right down to the wire. In many locations, broadband service simply wasn't available. "We ended up with 80 stores on frame," which, at 256Kbit/sec., was slower and more expensive than DSL, he says.

[AT A GLANCE]

Trans World Entertainment Corp.

Albany, N.Y.
www.twec.com

THE BUSINESS: Retailer TWE sells nearly $1.4 billion worth of music, movies and electronic games each year at about 1,000 stores nationwide.

SIZE OF IT DEPARTMENT: 60

PROJECT COST AND PAYBACK:

TWE spent $50,000 on outside consultants and dedicated five programmers to the project to complete the initial system integration phase. The company spent another $2.8 million on hardware and software.

Simmons contracted out the networking job, but POS installations and system training were handled by 25 in-house teams that included some store managers and district managers. Epicor staged the systems for the teams. "All they needed to do was take it out of the box, plug it in, and they were ready to go," says Diane Cerulli, director of product marketing, who was Epicor's project manager for the job.

Court Newton, director of store systems, says using in-house staffers was a win. "They had more skin in the game than independent contractors," he says. Newton spent the first six weeks making preparations, including bringing in the teams for a weeklong training before sending them into the field. "By far, this was the most well-orchestrated platform transition I've ever seen," says Paul Cox, a Musicland regional manager who participated in the installation training.

The teams then spent six grueling weeks on the road. "We changed everything: hardware, software, networks, policies and procedures. It was a relentless pace of execution for six weeks. There were no fallbacks," Newton says. Staffers had to work around problems such as damaged shipments, improperly staged equipment and incorrectly placed network jacks. Some 30 to 40 stores that didn't have either broadband or frame relay were temporarily set up with dial-up connectivity. "If there was a problem, we ran into it," Newton says.

All stores were online in 89 days — one day ahead of schedule. Once the last store came online in late June, batch uploads from Musicland's mainframe were turned off. "It was four months to total transition" from the time of the first initial meeting, Hinkle says. That's remarkable, says Cullen, adding that many integration projects get bogged down after the deal closes.

Having standardized, repeatable processes was the No. 1 key to success, Hinkle says. Consistency was also important. For example, while no two stores have the same topology, the network architecture is exactly the same.

Good relationships with TWE's vendors, including AT&T Inc., Epicor, IBM and NCR, were vital to keeping the project on track and costs in check. TWE regularly gave some of its business to key partners rather than forcing them to bid on every job. That paid off when Hinkle asked vendors to bend over backward to meet the 30-day window. "We paid very few premiums," he says. "When you work closely together, you can achieve rapid results."

Finally, TWE's "train the trainer" model and the use of internal staff for the field installation and training made a big difference. "It gave them hands-on experience," Hinkle says. The new system gives Cox profit and loss reports for his stores within seven days of closing — much faster than the 30 days the old system required.

TWE's approach is unusual, says Cullen. "If you want to move really fast, your normal inclination is to get professionals who are experienced," he says. By using internal staff, TWE no doubt took a productivity hit from having the teams on the road rather than doing their normal jobs. But leveraging the Musicland store management's familiarity with the staff probably helped smooth the training, Cullen says.

Cox says using managers as installers and trainers had another side benefit. "The strongest byproduct was the connection with other [managers]," he says. "Those relationships live on." ■

Put Your IT Passion to Work

THE MONSANTO EXPERIENCE

At Monsanto, we're passionate about using science and technology to make agriculture more productive. Through our innovations, we help farmers produce healthier foods, better animal feeds and more fiber, while also reducing agriculture's impact on our environment.

At Monsanto, we believe in –

INNOVATION

Advanced science and innovative technology are at the heart of our company. We are committed to developing science based solutions to make our farmer customers more productive and profitable.

AGRICULTURE

Making agriculture stronger helps people feel that they are making a difference by feeding the world while preserving the environment.

EXCELLENCE

People at Monsanto are driven to do extraordinary things and are dedicated to being the best in our industry.

GREAT WORKING RELATIONSHIPS

Monsanto is team based with highly qualified professionals sharing knowledge, creating a great place to work and allowing employees to take ownership for results.

We are seeking to add top talent nationwide in our Information Technology function. Talents being sought include knowledge and experience in the areas of SAP, JAVA, UNIX, Information Security and Project Management.

Visit **www.monsanto.com** and **www.monsanto.com/careers.com** to learn more about Monsanto, our passion and our opportunities.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2006

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2007

2007 ASUG Impact Award

InformationWeek 500 BUSINESS TECHNOLOGY INNOVATORS 2007

MONSANTO
imagine™

Monsanto values diversity and is an equal opportunity affirmative action employer. M/F/D/V

GETTY IMAGES

How to Influence Anyone

In IT, influencing those over whom you have no authority is the key to success. Here's a strategy for doing it.

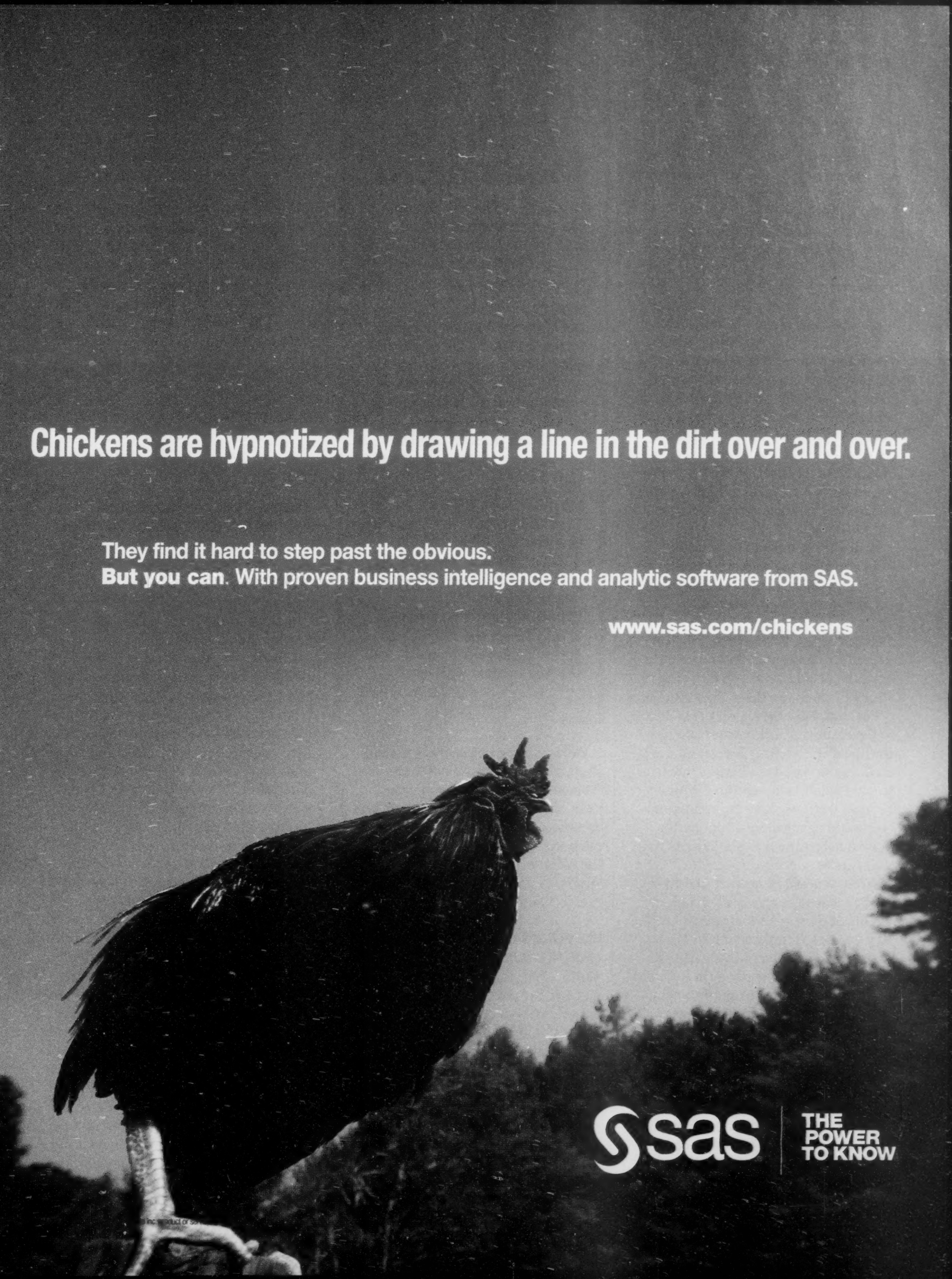
By David Maxfield

WHEN IT COMES to influence, we stink. We stink as individuals, we stink as organizations, and we stink as a society. Consider just a few examples:

- Dieters spend $40 billion a year on weight-loss products, and 19 out of 20 lose nothing but their money (National Eating Disorders Association).
- Some 70% of smokers quit, then resume in less than 12 months (American Heart Association).
- Companies spend more than $300 billion for training every year, but less than 10% of what people are taught sticks ("Transfer of Training: A Review and Directions for Future Research," by T.T. Baldwin and J.K. Ford, 1988).
- Two out of three criminals are rearrested within three years (U.S. Department of Justice).

If influence is the capacity to help ourselves and others change our behavior, then it is clearly one of the most vital, yet scarcest, commodities on the planet. We all want influence, but few of us know how to get it. And in IT, the ability to influence those over whom you have no authority is the difference

Continued on page 52



Chickens are hypnotized by drawing a line in the dirt over and over.

They find it hard to step past the obvious.
But you can. With proven business intelligence and analytic software from SAS.

www.sas.com/chickens

sas | THE POWER TO KNOW

Continued from page 50

between success and failure.

I'm going to show you a new view of influence that will help you lead change within your IT organization and beyond.

Mike Miller employed this influence strategy when he became vice president of development at Sprint PCS Group, whose 3,000-person IT organization hadn't met a product release date in years, was running well over budget and had morale that was in the gutter. In less than 12 months, Miller achieved a 30% improvement in quality, a 100% improvement in on-time delivery of software releases, more than a 50% improvement in productivity and a 10% increase in employee satisfaction.

The key to successful influence lies in taking these three powerful steps:

1. Identify a handful of high-leverage behaviors that lead to rapid and profound change.
2. Use personal and vicarious experience to change thoughts and actions.
3. Marshall multiple sources of influence to make change inevitable.

IDENTIFY 'VITAL' BEHAVIORS. The first step to any successful influence strategy is to decide what you're trying to change. There are three big ideas here:

Focus on behaviors. Don't even begin to develop your influence strategy until you've carefully identified the behaviors that need to change. Interventions — such as educational courses, reorganizations and new equipment — should be considered only after you've determined the behaviors that will lead to success.

A few improved behaviors can drive a lot of change. Successful change agents don't spread their efforts across 10 priorities. They understand that profound change requires a precise focus, so they home in on three or four vital behaviors. For example, Sprint was plagued with "project chicken." Instead of being frank when they were behind schedule, project managers kept silent, hoping that others would admit to problems and take the heat for delays. This single failure was central to quality, schedule, productivity and morale problems. The behavior that eventually drove improvements in all these areas was honest and timely discussions about delays.

Ability or Motivation?

To remove barriers to change, you need to first understand whether the barriers relate to ability or motivation. Here are some examples of each:

ABILITY BARRIERS

PERSONAL: "I missed the training for this interface. I don't know how to use it."

SOCIAL: "I'm supposed to have a mentor to help me, but she's not in today."

STRUCTURAL: "Every time I call up this interface, my Elbonian software crashes."

MOTIVATION BARRIERS

PERSONAL: "I don't like using this new interface. It's just ugly."

SOCIAL: "I'd like to use it, but my boss told me to stick with the old interface for now."

STRUCTURAL: "I'd like to use it, and my boss is encouraging me, but my pay is based on speed, and this new interface is slower."

– DAVID MAXFIELD

Validate these behaviors by setting short-term goals within a low-risk environment. Don't assume you've found the right behaviors to focus on until you've conducted a mini-study. Create a small pilot study in which you can watch the effect of new behaviors on results. When you're sure about the behaviors, create a large-scale influence strategy.

USE PERSONAL AND VICARIOUS EXPERIENCE TO CHANGE THOUGHTS AND ACTIONS. Changing behavior requires changing minds. People base their actions on two critical questions: "Can I do it?" and "Will it be worth it?" Unless the answers are affirmative, you won't change much behavior. The vast majority of attempts to influence these answers rely on presentations of data, carefully reasoned arguments and eloquent speeches. But the evidence is clear that verbal persuasion doesn't work, at least not with profound, persistent and resistant problems.

Personal experience is the gold standard for changing beliefs. Forget about arguments. Launch a pilot test, take people on a field trip, or otherwise immerse users in a safe version of the experience. As one IT manager put it, "I don't even try to persuade them. I put our virtualization software onto their desktops and have them use it. A week later, they've convinced themselves."

It's far more convincing to show than it is to tell. When personal experience isn't possible, use vicarious experience. Give users a demonstration, have them share their experiences, or take them to a location where they can see your solution in action. Vicarious experience is convincing because people see and hear the results for themselves, taking "trust me" out of the equation.

MARSHALL MULTIPLE SOURCES OF INFLUENCE TO MAKE CHANGE INEVITABLE. When you're trying to influence persistent and resistant behaviors, don't ask, "What's the least I can do to influence change?" Instead ask, "What is the most I can do to make absolutely sure people will change?"

Identify whether the barriers involve ability or motivation. Remember, the behavior will change only when the "Can I?" and "Will it be worth it?" questions are answered affirmatively. Attempting to motivate a person who feels unable to change will only create frustration — for both of you. Likewise, working to light a fire under an unmotivated person is a fool's game.

The key to this diagnosis is not looking for the one crucial barrier, even though there may be one that stands out. The key is to address every single barrier to guarantee success.

Using these influence tools, you can solve any problem that can be affected through improved behavior — your own behavior or the behavior of others — from the simplest irritations to the most persistent, resistant and profound problems you can imagine. ■

Maxfield *is the co-author of* Influencer: The Power to Change Anything *(McGraw-Hill, 2007). He is also the lead researcher at VitalSmarts, a corporate training and organizational performance consulting firm.*

Trusting the wrong LTO tape
can come back to bite you.

FUJIFILM
LTO
Ultrium 4
DATA CARTRIDGE
800
1600

nanocubic

Fujifilm's NANOCUBIC Technology.
The antidote to data storage insecurity.

What separates one LTO Ultrium data cartridge from another? In the case of LTO 4, it's clearly Fujifilm's NANOCUBIC Technology. It features a unique, ultra-thin coating process and a dispersion technology that creates the industry's smoothest recording surface, ensuring higher recording density and maximum reliability. Add to that the Ultrium 4 system's security of encryption and 1.6TB of storage capacity, and you've got the ultimate in data tape recording.

For more information on the complete line of Fujifilm data storage media and accessories, contact your Authorized Fujifilm Dealer or visit our website at
www.fujifilmusa.com/tapestorage

FUJIFILM
No one backs you up like we do.

© 2007 FUJIFILM U.S.A., Inc. Trademarks are the property of their respective owners.

Virtualization 101

These four steps will help you get it right the first time.

By Robert L. Scheier

VIRTUALIZATION — creating logical pools of IT resources not linked to physical devices — can reduce spending on new server and storage hardware, increase application uptime and simplify IT management. But your organization will get those benefits only if you follow some key steps.

1 UNDERSTAND VIRTUALIZATION

Some users purchase storage virtualization for only one purpose, without realizing the other benefits it can provide them, says Mike Karp, an analyst at Enterprise Management Associates in Boulder, Colo. For example, he says, "it does not necessarily pay to buy file-based virtualization technology just to do data migration." Storage virtualization becomes more worthwhile when it is also used for purposes such as capacity management, load-balancing and information life-cycle management, which moves data to less-expensive storage devices as the data becomes less valuable.

Thomas Williamson learned that lesson the hard way. The manager of network operations at the Calvary Chapel in Fort Lauderdale, Fla., purchased VMware ESX to virtualize 25 servers, but he wasn't aware that he could also virtualize the storage for those virtual machines. It was only after purchasing a 4TB Dell/EMC CX300 SAN that he learned from a user group about DataCore Software Corp.'s SANmelody storage and virtualization management software.

Williamson says SANmelody allows him to use regular servers linked to low-cost disk arrays to expand his storage capacity and use features such as snapshotting for much less money than it would cost with the Dell/EMC SAN. "The biggest mistake for us was our lack of research," he says. "When we found out about DataCore, we [thought], 'Why didn't we wait the extra month; why didn't we research the thought of storage virtualization?' "

Users seeking to virtualize their file-based storage should first consider their objective, says Greg Schulz, founder of The StorageIO Group, a Stillwater, Minn.-based industry analysis and consulting firm. If the goal is to simply reduce the number of network-attached storage (NAS) appliances in use, consolidating them into fewer, larger devices might be easier and less expensive than virtualization, he says. But if the goal is to get a single view of all the space available on all the NAS appliances in different offices, virtualization might be the better choice.

2 CREATE A PROCESS

Realizing cost savings — or even just keeping the virtual environment stable and secure — requires consistent processes for creating, configuring, maintaining and eventually eliminating virtual servers when they are no longer needed.

Since you don't need to purchase new hardware to set up a new virtual machine (VM), there's often no formal process for approving virtualization projects, says Stefan Paychere, founder and chief technology officer at Dunes Technologies Inc., a virtualization management software vendor in Stamford, Conn. That lack of oversight can result in a "sprawl" of virtual servers that is as hard to manage as physical server sprawl.

Botched changes to a physical host server are especially dangerous, because they can affect the availability or performance of multiple VMs, says Vick Vaishnavi, director of product marketing at BladeLogic Inc., a data center automation software vendor in Lexington, Mass. Many IT managers also neglect backup and fail-over plans for virtualized environments, he says, even though virtualization can make it easier for working servers to take over for failed hardware.

Creating sound processes governing the VM life cycle requires an in-depth understanding of how the physical servers and their computing resources

Continued on page 56

Your potential. Our passion.

Microsoft

defeating witches. easy.

1. Boil, bubble, toil, and trouble.
Witches are big with brews. Why not make one of your own to use against them? Sure, eye of newt is tough to find at the local market, but it's probably available online.

2. Melt the Witch.
You've seen the film so you know the big ending. A bucket of water, poured directly Witchward, causes her to steam, melt, and dissolve into a puddle on the floor. Lure her to the watercooler and you're done.

3. Fight magic with magic.
With a wand of your own—say a pointer—you can create some magic of your own. Before you know it, you'll be turning Witches into toads.

4. Insult the Witch.
Witches, despite their warty exteriors, are quite sensitive. So asking "Hey, Witch—is that your nose or a green banana?" can be devastating.

5. Steal her broom.
Nearly every Witch has a magic broom, and if you can get it away from her she's basically grounded. And, with a little practice, you can cut your commute in half.

defeating worms. easier.

1. Implement Microsoft® Forefront™.
Forefront makes defending your systems easier. It's a simple-to-use, integrated family of client, server, and edge security products (such as ISA Server 2006) that helps you stay ahead of your security threats more easily than ever.

For case studies, free trials, demos, and all the latest moves, visit **easyeasier.com**

Microsoft®
Forefront™

Managing Expectations

Careful research upfront will help you set reasonable expectations. Here are the most common outcomes of virtualization, in the order that they are achieved, according to analyst Andi Mann at Enterprise Management Associates:

1. **Enabling disaster recovery and business continuity**
2. **Increasing flexibility and agility**
3. **Improving server utilization**
4. **Reducing downtime**
5. **Lowering administration and management costs**

Continued from page 54

are divided among VMs and how the VMs map to the service-level agreements about the performance and uptime of applications, Vaishnavi says.

Consistent monitoring of the VMs is also necessary to ensure that they've been properly configured to comply with corporate, industry or government standards.

3 MEASURE AND TEST

Predicting the hardware required for each VM can be tricky. To do that accurately, Paychere advises taking these five metrics into account:

- The number of CPU cycles
- The amount of disk space
- The level of disk I/O
- The amount of memory
- The network bandwidth each VM will require

Some tools, such as VMware Inc.'s Distributed Resource Scheduler, can dynamically reallocate and balance VMs among physical machines as application needs change, he says. Premigration tools from several vendors can also help you calculate the best ratio of virtual to physical servers.

Schulz recommends testing VM configurations under actual performance conditions, rather than extrapolating from tests with only a few servers or a small amount of data. He also suggests employing virtualization first for low-risk activities, such as testing and development, then moving on to new applications developed and tested in virtual environments, and only then using it for older applications.

4 TAKE A TOTAL SYSTEMS VIEW

A physical server running multiple virtual machines generates far more network traffic than one running a single application. But IT decision-makers often don't consider the impact of virtualization on other parts of the IT infrastructure, says Jay Kramer, vice president of worldwide marketing at iStor Networks Inc., a storage vendor in Irvine, Calif.

Calvary Chapel's Williamson says he underestimated how server virtualization would boost his storage needs. "When you're working with server virtualization, you can throw up a server in a second and use 15GB to 20GB of storage without even realizing it," he says.

Analyst Andi Mann at Enterprise Management Associates says companies can reduce their appetite for storage by "tightly restricting" the creation of VMs through tools that perform automated discovery, inventory and configuration management.

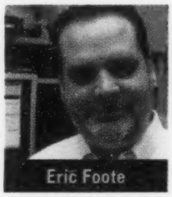
Boosting network bandwidth to handle this increased traffic to and from VMs might require implementing multipathing, path fail-over and load-balancing on the network in case one network component becomes overloaded or fails.

Maintaining proper security, uptime or redundancy might require creating virtual LANs to keep sensitive traffic from unauthorized eyes or on the fastest network links, says Kramer.

All in all, virtualization "should not be adding any more complexity, should not be adding any more management work for you," says StorageIO's Schulz. "It should not be introducing any new bottlenecks; it should not be introducing any new instabilities." By thinking through virtualization beforehand, he says, you can ensure that "you are using the right tool for the right problem at hand." ■

Scheier *is a freelance writer based in Boylston, Mass. He can be reached at bob@scheierassociates.com.*

DO Sweat the Details



Eric Foote

Once you finalize the grand design of your virtualization project, beware of details that can unexpectedly increase costs or complexity, says Eric Foote, chief technical architect at Troy, Mich.-based CareTech Solutions Inc., which provides IT and information management services to health care providers. Here are things to consider:

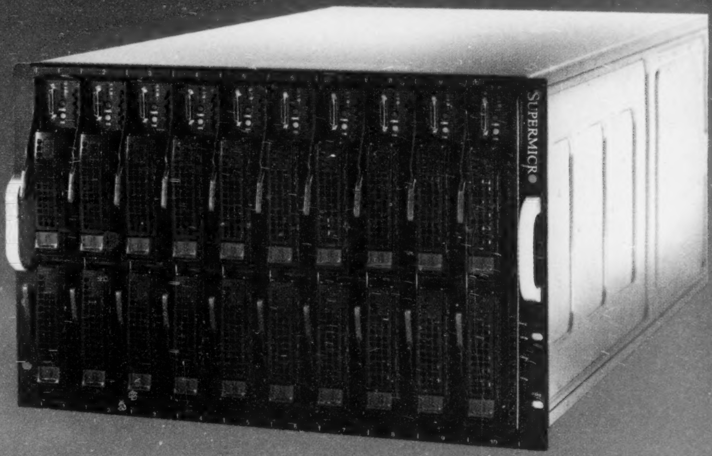
- **Different software companies have different licensing policies for virtual machines, which can result in significant unexpected licensing costs.**
- **Migrating applications and servers from physical to virtual machines can be more complicated than vendors claim. For example, the operating system or application may need updates before being converted to a virtual environment, and driver and hardware incompatibilities may necessitate multiple migration attempts.**
- **You will need new skills in the virtualized world, such as an understanding of virtualized switches, network traffic in virtualized environments, network interface cards and LANs, and storage with multiple hosts sharing common volumes.**

– ROBERT L. SCHEIER

SUPERMICRO®

SuperBlade™

Much Better TCO than 1U Servers

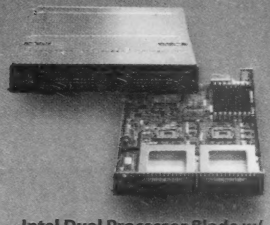


160 Cores (40 processors) and
640GB Memory in 7U
93% Power Efficiency

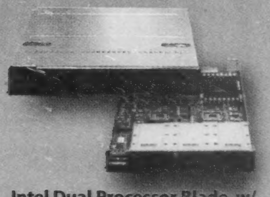
- Features Intel® Xeon® and AMD® Opteron™ DP/MP
- Holds up to 10/14 server blades
- Six enclosures fit a 42U rack
- 93% High-Efficiency, 3+1 redundant power supplies
- Chassis management modules
- Gigabit Ethernet switch modules
- Gigabit Ethernet pass-thru modules
- InfiniBand switch modules (20 Gb/s x2)

Application-Optimized for:

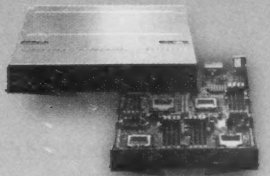
**Enterprises, Financial Services, Databases, Data Centers
Science Labs, High Performance Computing, Offices**



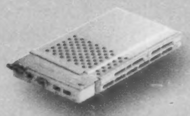
Intel Dual Processor Blade w/ 3.5" Hot-plug Drive Bays



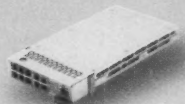
Intel Dual Processor Blade w/ Six 2.5" Hot-plug Drive Bays



AMD Quad Processor Blade

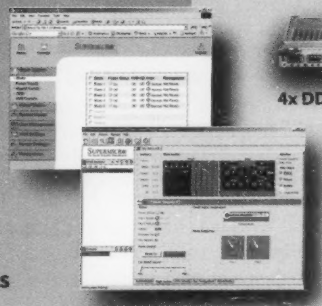


Chassis Management Module

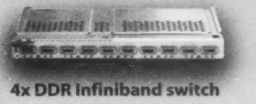


Gigabit Ethernet Module

CMM Web-based GUI



CMM IPMI View



4x DDR Infiniband switch

AMAX	Arrow Electronics	ASI	Bell Micro	Ingram Micro	MA LABS	Synnex	Tech Data
1-800-800-6328	1-888-427-2250	1-800-2000-ASI	1-800-232-9920	1-800-456-8000	1-408-941-0808	1-800-756-5974	1-800-237-8931
www.amax.com	www.arrownacp.com	www.asipartner.com	www.bellmicro.com	www.ingrammicro.com	www.malabs.com	www.synnex.com	www.techdata.com

© 2007 Super Micro Computer, Inc. Specifications subject to change without notice. All other brands and names are the property of their respective owners.

www.supermicro.com

SECURITY MANAGER'S JOURNAL | C.J. KELLY

If Ever We Step Into the Breach

A **federal regulation** has a **snowball effect,** requiring the agency to change several **procedures and contracts.**

SECURITY professionals don't work in a vacuum. Nor do we simply track down and implement security best practices. Sometimes, we are dictated to. And when you work in a state agency that has to follow the mandates of the federal Centers for Medicare & Medicaid Services (CMS), you need to pay close attention and jump when you're told to jump. The CMS is the final authority for my agency in all matters pertaining to the security of confidential health information. When it tells us we "should" do something, it means we *must* do it.

You must, because if you don't, your state could not only lose federal funding for Medicaid programs, but also be saddled with severe penalties. But I have no qualms about compliance matters. I like to be ahead of the game, not lagging behind and living in fear.

A year ago, the CMS sent out a letter to all state Medicaid directors reminding them that they have an "obligation to abide by all Federal and State laws regarding the security and privacy of medical data and records, and of all protected health information."

That isn't a reminder I needed, but the letter also drew attention to federal legislation stating that states "should" perform an internal or external risk assessment.

The letter arrived at a good point in our fiscal cycle. We were able to get money budgeted so we could contract with an outside assessment firm. Since then, we have also performed a security self-assessment, following the guidelines from NIST Special Publication 800-26, and the legislative counsel's auditors and our agency's outside attorneys have also completed audits of us.

We sailed through them all without problems, but I should know better than to expect to relax. And sure enough, in August, we received a "clarification letter" from the CMS. Clarification was certainly needed, since I had completely missed the import of a statement that all security breaches "should" be immediately reported to the director of the Division of State Systems at the CMS.

> **■ I have no qualms about compliance. I like to be ahead of the game, not lagging behind and living in fear.**

Our practice is to report security breaches to our state's Office of Information Security, and I had assumed that we could continue to do so, provided that the state OIS reported the breach to the CMS. Not so. The buck stops here.

SILVER LINING

This certainly wasn't a case of overlooking bad news I didn't want to deal with. The truth is that I'd rather not report breaches to the OIS, since that office has been largely ineffective. Its budget is inadequate, it's poorly staffed, and it has been through three chief information security officers in the past three years. I'd just as soon report directly to the CMS, and maybe cc: the OIS.

Some states had questioned the legal basis for the CMS to require us to report breaches to its director of the Division of State Systems. The deal is this: If anything occurs that materially impairs a state's ability to meet the objective of its federal grants and matches, the CMS must be notified. A glance at the federal legislation that the CMS referred to convinced me that it's right.

Trouble Ticket

AT ISSUE: Federal regulators require notification of all security breaches.

ACTION PLAN: Change procedures and contracts to make sure the agency is in compliance.

But this interpretation means we have to make a lot of changes. We must report breaches to the CMS, alter the contract with our fiscal agent, change the wording of our business-associate agreements and review all contracts to ensure that they include language reflecting the requirement to report breaches to the CMS and outlining what the CMS calls "specific remedies."

We had to ask the attorney general's office to define what these "specific remedies" should be, but my guess is that it means figuring out how to pass the expense to the vendors should we face any penalties because of their actions. ■

COMPUTERWORLD.COM

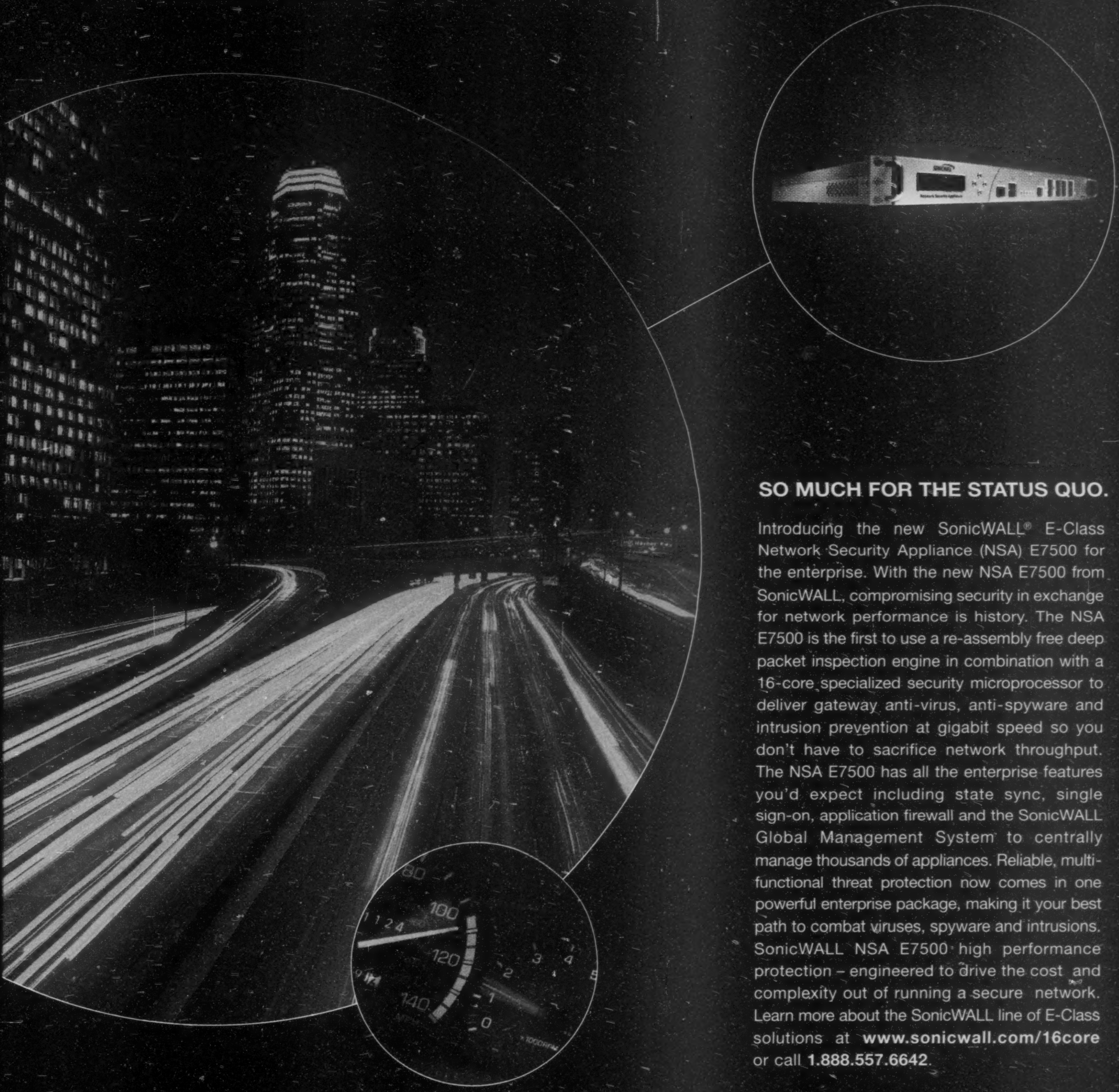
JOIN IN

To join the discussion about security, go to **computerworld.com/blogs/security**

This week's journal is written by a real security manager, **"C.J. Kelly,"** *whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.*

SonicWALL E-CLASS

NOW YOU CAN TURN ON FULL NETWORK PROTECTION WITHOUT COMPROMISING PERFORMANCE.



SO MUCH FOR THE STATUS QUO.

Introducing the new SonicWALL® E-Class Network Security Appliance (NSA) E7500 for the enterprise. With the new NSA E7500 from SonicWALL, compromising security in exchange for network performance is history. The NSA E7500 is the first to use a re-assembly free deep packet inspection engine in combination with a 16-core specialized security microprocessor to deliver gateway anti-virus, anti-spyware and intrusion prevention at gigabit speed so you don't have to sacrifice network throughput. The NSA E7500 has all the enterprise features you'd expect including state sync, single sign-on, application firewall and the SonicWALL Global Management System to centrally manage thousands of appliances. Reliable, multi-functional threat protection now comes in one powerful enterprise package, making it your best path to combat viruses, spyware and intrusions. SonicWALL NSA E7500 high performance protection – engineered to drive the cost and complexity out of running a secure network. Learn more about the SonicWALL line of E-Class solutions at **www.sonicwall.com/16core** or call **1.888.557.6642**.

NETWORK SECURITY

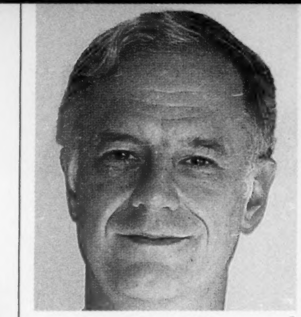
SONICWALL®

PROTECTION AT THE SPEED OF BUSINESS™

© 2007 SonicWALL, Inc. SonicWALL and the SonicWALL logo are registered trademarks of SonicWALL, Inc.

OPINION

Bart Perkins



ITIL Moves Upscale

THE Information Technology Infrastructure Library was developed by the U.K. Office of Government Commerce to describe a standard set of IT management processes. ITIL originally focused on the processes required to operate IT infrastructure effectively, such as incident management and change control. Version 3 of ITIL (commonly referred to as ITIL v3), which was released this summer, has an expanded scope. With v3, ITIL now includes definitions for the services IT provides (PC installation, software application training, employee mailbox creation and so on) as well definitions for the associated delivery processes.

Rodrigo Flores, founder of service-catalog software company NewScale Inc., uses a restaurant analogy to describe the expanded scope. In this analogy, ITIL v2 functioned as an operating manual for the kitchen staff of a school cafeteria. With a captive student audience, the cafeteria staff had relatively little concern for customer service. ITIL v3 functions as the business plan for an upscale restaurant. The restaurant's management team wants the restaurant to be profitable; consumers are looking for quality food, excellent service and fair prices (menu choices are provided in the ITIL service catalog); and the restaurant staff is focused on meeting customers' expectations. ITIL v3 provides definitions and processes to support all these sets of objectives.

With this expanded scope, ITIL v3 will become much more important and useful to IT organizations. Here's why:

V3 facilitates business trade-offs. A new v3 book from the ITIL Lifecycle Core Library, *Service Strategy* (TSO, 2007), describes a framework for making effective business trade-offs as well as trade-offs between cost and levels of service. The section on service portfolio management offers approaches for determining which services should be funded and which should be retired. This process facilitates decision-making within the IT organization and at the executive level.

V3 provides greater detail. Earlier versions described general characteristics of recommended IT processes. ITIL v3 provides expanded process definitions and also recommends specific implementation steps for most IT processes. In addition, v3 specifies the roles required to support IT processes, such as business relationship manager, service owner, product manager and service catalog manager. As a result, v3 requires less customization and is easier for organizations to implement.

■ ITIL v3 will become much more useful to IT organizations.

V3 addresses multiple audiences. Previous ITIL versions were written for IT technical staff. ITIL v3 addresses the needs of these additional groups:

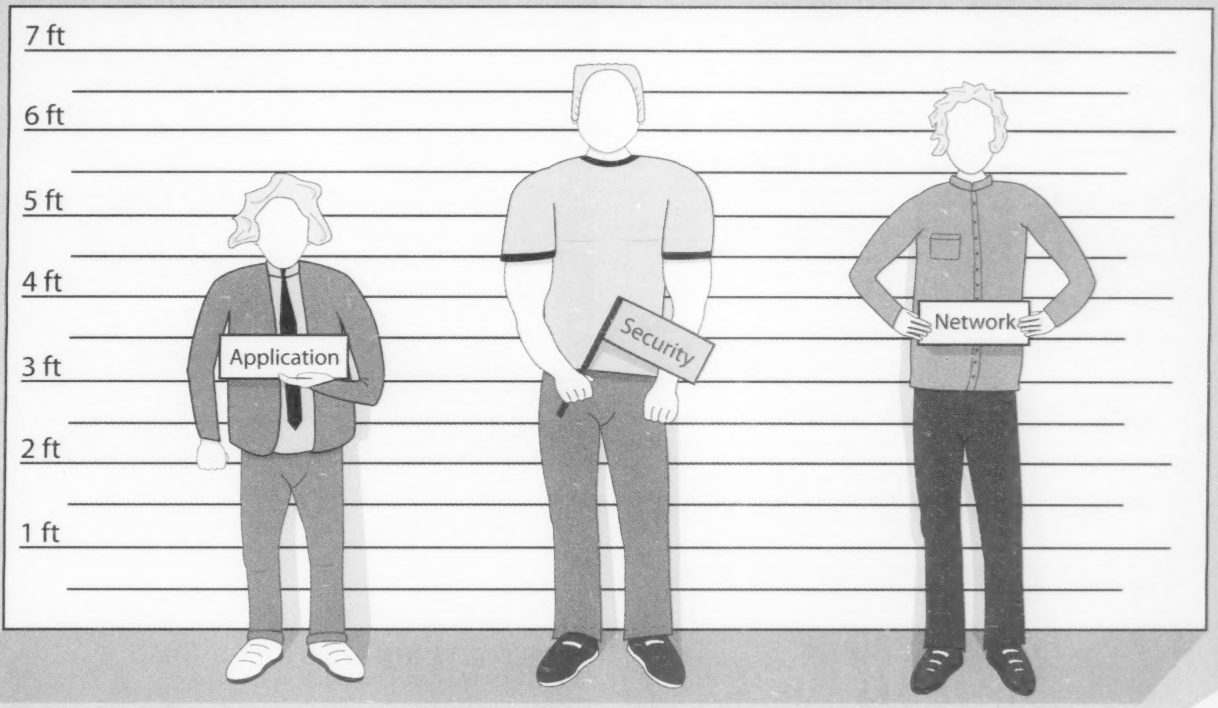
- Business executives, known as "customers" in the ITIL vernacular. V3 addresses concerns that senior business executives might have about tasks such as allocating resources, making business trade-offs and measuring results.
- Consumers of IT services. ITIL's new service catalog provides a menu of services for IT users. Menu items can be as simple as password resets or as complex as modifications to major systems.
- Outsourcers. They are leveraging the service catalog to standardize their offerings and pricing and to provide consistent definitions for communicating with their clients.
- Standards bodies. V3 lays the groundwork for industry operating standards. IT service management is relatively young and does not yet have widely accepted standards (such as GAAP for finance). ITIL v3 represents a step toward them.
- Users of other frameworks. ITIL v3 provides linkages to Six Sigma, Cobit and so on. This ability to integrate with other frameworks enables IT organizations to adopt ITIL without compromising previous investments in different models.

V3 provides standard definitions for IT services and the processes that manage them. Standardization helps organizations reduce the delivery costs of IT services and provide customers with consistent definitions and pricing. With wider adoption, ITIL v3 will provide a solid foundation for standards across the IT industry. ■

Bart Perkins *is managing partner at Louisville, Ky.-based Leverage Partners Inc., which helps organizations invest well in IT. Contact him at BartPerkins@LeveragePartners.com.*

Interop NYC
visit booth #329
Oct. 24-25

Line up network problems.



You've got an eyewitness.
Is it a network, application, or security problem? Find out instantly with the Network Instruments® GigaStor™ appliance. No other analysis device can quickly isolate the issue to provide valuable retrospective analysis and security forensics. Every transaction is recorded, making it easy to go back in time to determine not only when the anomaly took place, but *why*.

Resolve intermittent problems, track compliance, isolate VoIP quality issues, identify zero-day attacks and more on WAN, Gigabit and 10 GbE networks. Reduce network complexity with the GigaStor. Because when it comes to your network, everything is a suspect.

GigaStor: Get proof. Take action. Move forward.

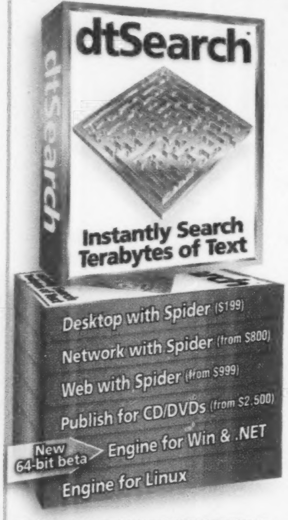
NETWORK® INSTRUMENTS

Learn more about GigaStor. 800-566-0919
www.NetworkInstruments.com/lineup

© 2007 Network Instruments, LLC. All rights reserved. Network Instruments, GigaStor, and all associated logos are trademarks or registered trademarks of Network Instruments, LLC.

MARKETPLACE

Instantly Search Terabytes of Text


dtSearch
dtSearch
Instantly Search Terabytes of Text
Desktop with Spider ($199)
Network with Spider (from $800)
Web with Spider (from $999)
Publish for CD/DVDs (from $2,500)
New 64-bit beta
Engine for Win & .NET
Engine for Linux

- over two dozen indexed, unindexed, fielded data and full-text search options
- highlights hits in HTML, XML and PDF, while displaying links, formatting and images
- converts other file types (database, word processor, spreadsheet, email and attachments, ZIP, Unicode, etc.) to HTML for display with highlighted hits
- Spider supports static and dynamic Web content, with WYSWYG hit-highlighting
- API supports .NET, C++, Java, SQL databases. New .NET Spider API

dtSearch® Reviews

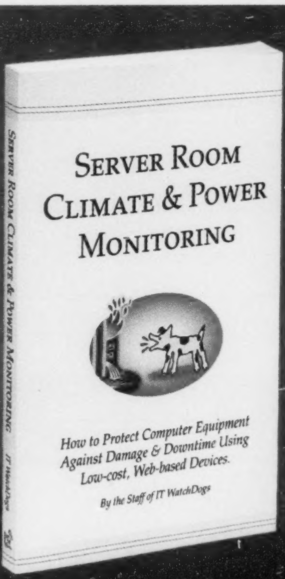
- "Bottom line: dtSearch manages a terabyte of text in a single index and returns results in less than a second" – *InfoWorld*
- "For combing through large amounts of data, dtSearch "leads the market" – *Network Computing*
- "Blindingly fast" – *Computer Forensics: Incident Response Essentials*
- "Covers all data sources ... powerful Web-based engines" – *eWEEK*
- "Searches at blazing speeds" – *Computer Reseller News Test Center*

Contact dtSearch for fully-functional evaluations

The Smart Choice for Text Retrieval® since 1991

For hundreds more reviews — and developer case studies — see www.dtsearch.com

1-800-IT-FINDS • www.dtsearch.com


SERVER ROOM CLIMATE & POWER MONITORING
How to Protect Computer Equipment Against Damage & Downtime Using Low-cost, Web-based Devices.
By the Staff of IT WatchDogs
SERVER ROOM CLIMATE & POWER MONITORING
IT WatchDogs

Server room climate worries?

Get our free book.

E-mail FreeBook@ITWatchDogs.com with your mailing address or call us at 512-257-1462.

Improve Supply-Chain Performance.

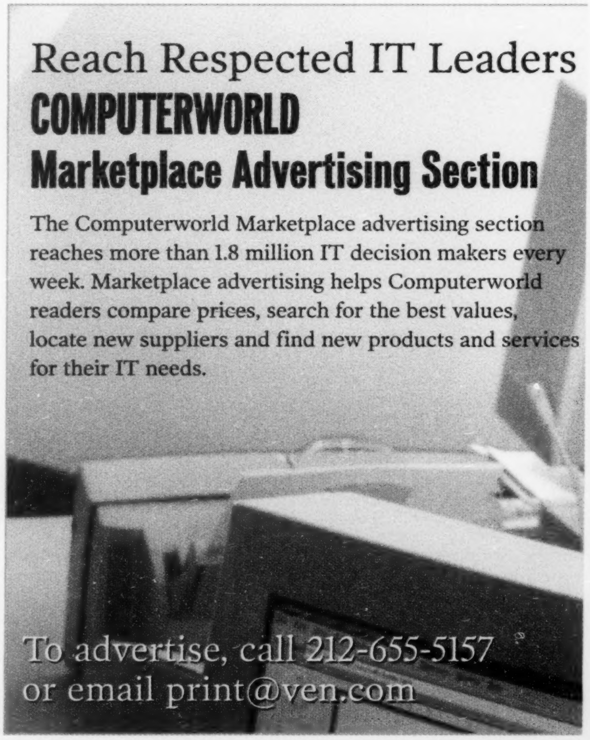
Increase Supply Chain Execution Productivity and Efficiencies with LXE Rugged Wireless Computers.

Boost the performance of your supply chain execution applications with LXE's industrial wireless data-collection solutions including ultra-rugged and reliable wireless computers, mobile RFID technologies, and wireless networking products.

Windows CE.net
Windows CE.net

For your **FREE white paper**, "Key Enablers for an Efficient & Optimized Voice-Based Warehouse," call **1-800-664-4593**, email **info@lxe.com**, or visit **www.lxe.com/CW.**

LXE



Reach Respected IT Leaders

COMPUTERWORLD

Marketplace Advertising Section

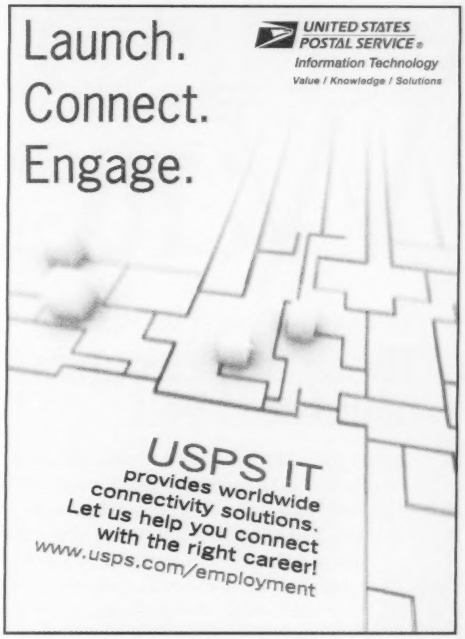
The Computerworld Marketplace advertising section reaches more than 1.8 million IT decision makers every week. Marketplace advertising helps Computerworld readers compare prices, search for the best values, locate new suppliers and find new products and services for their IT needs.

To advertise, call 212-655-5157 or email print@ven.com

Operations Research Analyst. Experience required. Send resume to M. Fleming, Hyland Software, 28500 Clemens Rd., Westlake, OH 44145. Must ref job code IM1007.

IT Corp., Aliso Viejo, Orange County, CA and at unanticipated client sites across the U.S. has openings for Software Engr., System/Programmer Analyst, Project Leader/Manager, Biz Dev Consultant and Biz Analyst. Mail resume and position desired attn to HR- Jude Patrick , USTRI 120 Vantis Ste 500 Aliso Viejo CA 92656.

Citadel Investment Group is seeking a Senior Systems Analyst in Chicago, Illinois to design and implement complex Windows client/server applications and multi-tier software systems. Lead the development of various object-oriented, mission-critical, front-end applications for the RiskArb, LongShort and Equity Restructuring trading desks located in Chicago, San Francisco, London and Tokyo. Responsible for developing front office financial applications, including all phases of the software development lifecycle. Determine the requirements for current and future projects. Serve as a mentor to others in providing technical support and assistance throughout each project's lifecycle. Requires a Bachelor's degree in Computer Science, or the foreign equivalent, and 5 years of relevant work experience. Must have previous experience with real time systems and financial services, as well with C++, MFC, Sybase, NT, and Linux. Qualified candidates should submit a cover letter and resume, job reference R-0055, to: itjobs0055@citadelgroup.com. Principals only need apply.



Software Engineer (New York) NY: Dvlp computer applications, software/specialized utility programs. Bach w/2 yrs Exp. Respond to HRD, Hari World Travel Inc. 3 West , 35th Street, 5th Floor, New York, NY 10001

Senior Web Developer sought by Webroot Software, Inc. (Mountain View, CA) Dvlp & maintain numerous web-based applics. Reqs incl Master's or equiv. in Comp Sci, Engg or rel. field; & working knowl of PHP, Web Svcs, CSS, AJAX & Java Script; Submit resumes to HR Manager-KM, 2560 55th St, Boulder, CO 80301.

Computer & Information Research Scientist to research and develop new technologies for systems architecture, data manipulation and retrieval in custom applications. Experience required. Send resume to TechnologyXperts, Inc., Attn: HR Dept., 23600 Mercantile Rd., Ste. G., Beachwood, OH 44122. Must reference job code #CS001.

PROGRAMMER ANALYST w/2 yrs exp to dsgn, dvlp, analyze & test computer s/ware systems, client server & object oriented applics using Java, Java Script, Perl/CGI, Shell Scripting, AWK, Sybase, MS SQL Oracle (PL/SQL, SQL) & HTML. Formulate & dsgn s/ware system using scientific analysis & mathematical models. Mail res to: iNINE Technologies LLC, 3 Independence Way, Ste 117, Princeton, NJ 08540. Ref: SD. Job loc: Princeton, NJ or any unanticipated locs in US.

SOFTWARE ENGINEER (Philadelphia) – Design & develop a front-end web interface utilizing knowledge of Java, Struts, Tomcast, JSP, JavaScript, HTML & CSS. Maintain & test front-end architecture including functionality, security, usability, scalability & performance. Analyze, fix & verify bugs within the web application. BS in Engineering/Computer Science & 2 yrs exp or MS in Engineering/Computer Science req'd. 35 hrs/wk. Send res to Iptivia Inc – 11 Broadway, Ste 1300, New York, NY 10004

Sr. Systems Engineer w/Bach or foreign equiv in Comp Sci or Engg or Math & 2 yrs exp to dsgn & dvlp n/work architecture. Install, configure, maintain & troubleshoot Sun Solaris, RedHat Linux, NFS, DNS, NIS, SNMP, SMTP. Dsgn, dvlp & implmt Veritas & RedHat GFS Cluster installations. Implmt & manage large storage area n/work using EMC & NETAPP n/work filer storage solutions. Implmt & manage s/ware distribution infrastructure using Perl, HTML, TIVOLI & Sybase. Perform system & monitoring using SITESCOPE & custom builds using Shell Scripting. Mail res to: Open Systems Technologies, 462 7th Ave, 15th Fl, NY, NY 10018. Job Loc: NYC.

Splash Graphics, Inc. in Lombard, IL seeks a Programmer Analyst with a Master's in Comp Sci or Info Technology or equiv, and 6 months of exp in software architecture design, quality assurance, and programming & DB admin. Mail to Dhiren Sanghani, Corp Sec at 230 N. Eisenhower Ln, Lombard, IL 60148 or fax to 630-396-2007.

CO-BRANDED

EMAIL BLASTS

Reach your target audience of professional IT job seekers with Computerworld's Co-Branded Email Blasts. This unique program allows you to choose your criteria of 100% opt-in subscribers by geography, company size, job title and industry.

Call Laura Wilkinson
at 800-762-2977 for more details!

PROGRAMMER ANALYST w/2 yrs exp to dsgn & dvlp composite views, gather business reqmts & identify products. Write PRO*C codes for data migration. Shell Scripts for deployments, regression test & back up process. Perform file mgmt, CPU usage, create users & grant permission in Unix systems. Use Oracle, PL/SQL, ASP, Shell Scripts & SQL. 2 yrs exp as Technical Leader acceptable. Mail res to: iNINE Technologies LLC, 3 Independence Way, Ste 117, Princeton, NJ 08540. Ref: RS. Job loc: Princeton, NJ or any unanticipated locs in US.

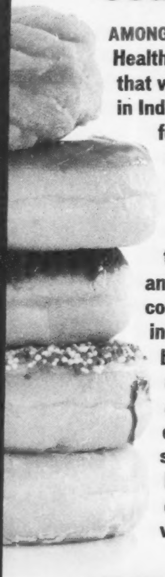
PROGRAMMER ANALYST w/2 yrs exp to analyze, dsgn, dvlp & test applics using Visual Studio .Net, C#, ASP.Net, VB.Net, C++, MS Visual C++, COM/DCOM, SQL Server, Oracle, Win XP. Dvlp, analyze, implmt, debug s/ware release & product support. 2 yrs exp as Deputy Mgr-Projects acceptable. Mail res to: iNINE Technologies LLC, 3 Independence Way, Ste 117, Princeton, NJ 08540. Ref: HB. Job Loc: Princeton, NJ or any unanticipated locs in US.

Project Engineer needed for various engg & automated appl using tools such as LABVIEW, DAQ, IMAQ, PLCs, Robotic Control (FLEX for YUSHIN), GPIB, VXI, PXI. Mail resume to: DataFleet, 708 N. 1st St., #112, Minneapolis, MN 55401.

Career Watch

SIN TAXES IN THE WORKPLACE

Those extra pounds could cost you.



AMONG THE FIRST COMPANIES to take advantage of new Health Insurance Portability and Accountability Act rules that went into effect July 1 is Clarian Health Partners Inc. in Indianapolis, which will start charging employees more for their health insurance in 2009 if they let health risks such as tobacco use, obesity or high cholesterol go unchecked. Steven Wantz, senior vice president for administration and human resources at Clarian, says in the July 22 issue of *Workforce Management* that despite five years of wellness initiatives, Clarian's annual health benefit costs continued to climb. The company hopes that charging more will put those costs in front of employees and motivate them to institute behavioral changes. You can expect others to take this approach. In PricewaterhouseCoopers' May 1 "Management Barometer" survey, 62% of the 135 top executives who responded said that their companies should start making employees who exhibit unhealthy behaviors pay a larger share of their health benefit costs. That's up from 48% who expressed such a view in PwC's 2005 survey.

Who's Got Their Back?

When leaders were asked to name the most important sources of help and support through job transitions, U.S. leaders overwhelmingly chose their boss and their colleagues, while leaders outside the U.S. chose family and external advisers.

	U.S.	International
Boss	44.4%	21.7%
Colleagues/peers	43.9%	23.3%
Family and friends	21.8%	34.8%
External advisers	6%	27.9%
Internal mentors/coaches	17.7%	11%
Human resources	6.2%	1.5%

SOURCE: DEVELOPMENT DIMENSIONS INTERNATIONAL INC.'S FALL 2006 SURVEY OF 385 U.S. AND 400 GLOBAL LEADERS IN FRONT-LINE, OPERATIONAL AND STRATEGIC ROLES; MULTIPLE RESPONSES ALLOWED.

■ ASK A PREMIER 100 IT LEADER

Gregory S. Smith

TITLE: CIO

ORGANIZATION: World Wildlife Fund

Smith is this month's guest Premier 100 IT Leader, answering readers' questions about training and certification. If you have a question you'd like to pose to one of our Premier 100 IT Leaders, send it to **askaleader@computerworld.com** and watch for this column each month.

What are the prospects for a 31-year-old graduating with a bachelor's in software engineering? I am currently working in a help desk support position. I think they are good, but you need to market yourself in a slightly different way, since you are competing with younger grads. According to a recent report by a leading IT advisory firm, software development and custom application work are in the money. Companies are spending IT dollars on software development, mainly in one of two platforms/languages: Java/J2EE and .Net. Depending on your expertise, you need to target firms that do lots of software development using the tools you are best with.

In interviews, don't try to camouflage that you are late to the game. Leverage it and do it in an honest way. As an IT professional for 22 years and most recently as a CIO, I think honesty, hard work and attitude matter the most. If you are motivated to do the best that you can and a prospective employer senses that, it doesn't matter when you got your degree.

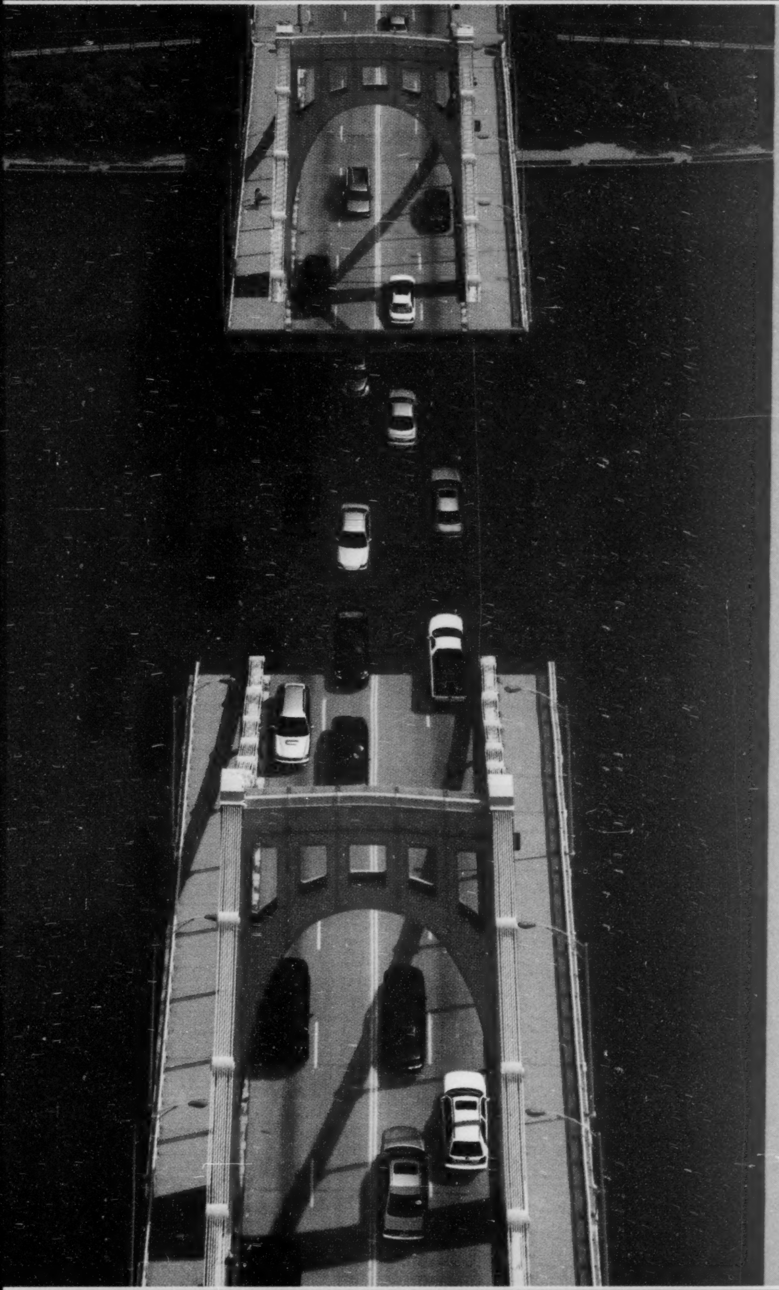
I'd also look into IT placement firms. IT shops all around the world use these firms to fill gaps. I like them because I can evaluate candidates for full-time positions. Oh, yeah, in keeping with my advice to other IT professionals on their way up the ladder — never give up!

I want to be a business/technology leader. I am considering a master's degree, but I'm uncertain whether I should go for an MBA or an MIS. I already have a background in business, with a bachelor's in business IT. My answer is right out of my book *Straight to the Top* (Wiley, 2006). You need to decide if you want to be a business or an IT leader, as there's a difference in the background required. While today's CIOs are also business leaders and many have MBAs on top of undergraduate technical degrees, they are IT leaders first, and most of them have technical backgrounds.

Since you don't have a pure IT technical background, it may be easier for you to rise up the ranks with an MBA than an MIS degree and focus more on a business leadership role than that of the CIO or CTO. Some of the best CIOs I know have hardcore technology backgrounds with an MBA. You've missed that to date. Thus, go for the more general MBA, which will give you a bit more flexibility to diversify at the top.

PAGE COMPILED BY JAMIE ECKLE.

WHEN INFORMATION AVAILABILITY MATTERS



SunGard. Setting new standards for Information Availability by delivering a range of solutions that meet your specific availability objectives. Flexible enterprise wide solutions from IT management to AdvancedRecovery^{SM}. 2,500 experts. Three decades of experience. 100% successful recovery track record.

To see how SunGard can help improve your IT availability stop by www.availability.sungard.com or call 800-871-5857 today.

SUNGARD®
Availability Services
Keeping People and Information *Connected.*

680 East Swedesford Road, Wayne PA 19087
800-468-7483 | www.availability.sungard.com

TO SEE THE TOP SEVEN ROADBLOCKS COMPANIES FACE IN ACHIEVING INFORMATION AVAILABILITY AND FIND OUT HOW TO AVOID THEM VISIT **WWW.AVAILABILITY.SUNGARD.COM/IA**.

SharkTank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Oh, They're Focused Now, All Right

New corporate CIO sends a memo around the divisional IT group. "It said the development and support group was being reviewed for possible offshore outsourcing," says a pilot fish there. "The process was intended to be 'open,' and employees were urged to remain focused." Four weeks later, one of the IT staffers notices a managers' meeting scheduled on a shared calendar. Topic of the meeting: "Managing offshore resources." Result: "Résumé-polishing is now in overdrive," fish says. "The previous period of uncertainty mentioned in CIO's e-mail has been replaced by widespread certainty that offshore outsourcing isn't being 'considered' – it's the plan."

Just Catching Up

User calls pilot fish to complain that while she's accessing her e-mail via the Web, she's getting prompted with a meeting reminder every five minutes for the same meeting. "I investigated," says fish, "only to find that the department manager sent out a meeting request with a two-week recurrence. Unfortunately, the manager made the effective date 2004, not 2007, so the user was clicking through 69 reminders – one every five minutes – of meetings that never took place."

Not That Smart

Manager complains that his department's printer isn't working, so pilot fish checks it out – and finds nothing wrong. "Everyone else in the department can print to it, and there are no jobs waiting in the job queue," says puzzled fish. "I ask him to print the report again. As I watch, he selects the printer in his office. I ask him why he's selecting that if he wants it to print on the department printer. His answer: 'The printer in my office is out of ink, so it should print on the other printer.' He had a hard time understanding that his PC isn't smart enough to automatically go find the printer that has ink."

Doin' That Thing

It's the early 1990s, and this pilot fish working at a local school system knows his boss has a vision problem – and is too stubborn to admit it. "While reading the manual for his printer, I discovered that if you pushed two command buttons while turning the machine on, it would print double-high/double-wide text," says fish. "I made the mistake of showing him the trick. For the next several years, despite my retraining him regularly on how to do it, several times a week he'd page me to come to his office and 'make that printer do that thing.' I figured out that he really hadn't been able to read the regular printouts in years."

■ *Sharky's happy to take a squint at your true tale of IT life. Send it to me at sharky@computerworld.com. You'll get a sharp Shark shirt if I use it.*

COMPUTERWORLD.COM

TIRED OF BUNGLING BOSSES
and clueless co-workers?
Swim on over to Shark Bait
and share your tales of woe:
sharkbait.computerworld.com.

CHECK OUT Sharky's blog, browse the Sharkives and sign up for Shark Tank home delivery at **computerworld.com/sharky**.

■ COMPANIES IN THIS ISSUE

Page number refers to page on which story begins. Company names can also be searched at computerworld.com

Acer Inc. 20
American Electronics Association 26
American Express Co. 22
American Heart Association 50
AMR Research Inc. 18
Apple Inc. 30, 42
AT&T Inc. 20, 48
BEA Systems Inc. 18
Beth Israel Deaconess Medical Center 26
Blue Cross and Blue Shield of Kansas City 18
Boston College 8
Brabeion Software Corp. 24
Business Objects SA 18
Calvary Chapel 54
CareGroup Healthcare System 34
CareTech Solutions Inc. 56
Cato Institute 26
CenterPoint Energy Inc. 16
Centers for Medicare & Medicaid Services 58
Chevron Corp. 24
Clarian Health Partners Inc. 64
Colorcon Inc. 36
Commerce Bancshares Inc. 16
Commerce Bank NA 16
Cyber-Ark Software Inc. 24
DataCore Software Corp. 54
Dell Inc. 54
Discover Financial Services LLC 22
Dunes Technologies Inc. 54
eBay Inc. 16
eMachines Inc. 20
Eastman Kodak Co. 16
EMC Corp. 54
Emergency Medical Associates 18
Enterprise Management Associates 54, 56
Enterprise Strategy Group Inc. 18
Epicor Software Corp. 48
Facebook Inc. 16
FileWave Inc. 42
Forrester Research Inc. 36, 46
Gartner Inc. 16, 22
Gateway Inc. 20
Geoscience Australia 20
Google Inc. 20, 28
Goss International Corp. 36
Hallmark Cards Inc. 16
Harvard Clinical Research Institute 34
Harvard Medical School 34
Heidelberg Web Systems 36
Hewlett-Packard Co. 18
IBM 16, 48
Indiana University 30
iStor Networks Inc. 56
IT Process Institute 28
Jaiku Ltd. 20
Japan Credit Bureau 22
LANDesk Software Inc. 44
LANrev LP 44
Logical Apps Inc. 20
ManageSoft Corp. 42
MasterCard International Inc. 22
Microsoft Corp. 18, 28, 30
Millipore Corp. 37
Motorola Inc. 44
Mueller Water Products Inc. 20
MySpace Inc. 16
MySQL AB 28
National Eating Disorders Association 50
National Institute of Standards and Technology 58
National Retail Federation 22
NCR Corp. 48
Netopia Inc. 42
New England Health Electronic Data Interchange Network 34
New York State Department of Environmental Conservation 16
NewScale Inc. 60
Novell Inc. 44
NTRglobal 44
Ohio Administrative Knowledge System 18
Ohio Bureau of Workers' Compensation 16
Ohio Department of Administrative Services 18
Oracle Corp. 18, 20, 28, 36
Packard Bell BV 20
PB Holdings Co. 20
PCI Security Standards Council 22
PricewaterhouseCoopers 64
Qualys Inc. 24
SAP AG 18, 36
Skype Inc. 44
Society for Information Management 20, 68
Sony Corp. 30
Sprint PCS Group 52
Steak n Shake Co. 24
Storage Networking Industry Assocation 16
The Boeing Co. 26
The StorageIO Group 54
Trans World Entertainment Corp. 46
Tripwire Inc. 28
U.K. Office of Government Commerce 60
U.S. Department of Justice 50
U.S. Supreme Court 18
VeriSign Inc. 24
Visa International Inc. 22
VitalSmarts LLC 52
VMware Inc. 56
Weather Channel Interactive Inc. 28
World Wildlife Fund 64

ADVERTISERS INDEX

Accenture 4-5
AT&T Wireless 13
CA 21
CDW Corporation 14-15
CommVault 33
dtSearch 62
FujiFilm U.S.A. 53
Hewlett-Packard 23, 25, 27
IBM Blade C4
IBM Express Seller 9
IBM IT Campaign 39, 41, 43, 45, 47
InterSystems 31
IT Watch Dogs 62
Kodak 19
LTO Ultrium 7
LXE 62
Microsoft Forefront 55
Microsoft Linux 29
Microsoft Unified Communication C2-1
Monsanto 49
NEC 3
Network Instruments 61
Samsung 11
SAS 51
SGI 67
Sharp C3
SonicWALL 59
Sun Microsystems 17
SunGard Availability Services 65
Super Micro 57
Verizon Wireless 35

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement #41321518. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly: except for a single combined issue the first two weeks of July and the last two weeks of December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171.

Copyright 2007 by Computerworld Inc. All rights reserved.

Computerworld can be purchased on microfilm and microfiche through University Microfilms Inc., 300 N. Zeeb Road, Ann Arbor, Mich. 48106. Computerworld is indexed. Back issues, if available, may be purchased from the circulation department. Photocopy rights: permission to photocopy for internal or personal use is granted by Computerworld Inc. for libraries and other users registered with the Copyright Clearance Center (CCC), provided that the base fee of $3 per copy of the article, plus 50 cents per page, is paid directly to Copyright Clearance Center, 27 Congress St., Salem, Mass. 01970. Reprints (minimum 100 copies) and permission to reprint may be purchased from Renee Smith, Computerworld Reprints, c/o Reprint Management Services, Greenfield Corporate Center, 1808 Colonial Village Lane, Lancaster, Pa., 17601, (717) 399-1900, Ext. 150. Fax: (717) 399-8900. Web site: www.reprintbuyer.com. E-mail: computerworld@reprintbuyer.com. Requests for missing issues will be honored only if received within 60 days of issue date. Subscription rates: $5 per copy: U.S. – $99.99 per year; Canada – $130 per year; Central & So. America. $250 per year; Europe – $295 per year; all other countries – $295 per year. Subscriptions call toll-free (888) 559-7327. **POSTMASTER:** Send Form 3579 (Change of Address) to Computerworld, PO Box 3500, Northbrook, Ill. 60065-3500.

intel
Xeon inside
Dual-core. Do more.
intel
Xeon inside
Quad-core. Unmatched.
sgi
sgi
sgi

When your blades work together, they work more efficiently

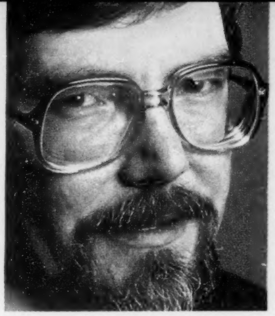
Power up & go with SGI® Altix® ICE, an Integrated Compute Environment built on a performance-dense blade architecture that combines an innovative new board design with Dual and Quad-core Intel® Xeon® processors to deliver up to 512 processor cores and 6 Teraflops of compute power per rack. It's a fast, efficient way to get more from your blades.

Put your problems on ICE at www.sgi.com/go/ICE

sgi®
INNOVATION
FOR RESULTS™

FRANKLY SPEAKING

Frank Hayes



Kids, Gadgets & IT

HOW OFTEN do you hear about a program promoting IT careers to young people that's so popular that kids who aren't part of the program are actually trying to sneak in?

That's what the Society for Information Management has going in Memphis. At SIM's annual SIMposium conference last week, the organization talked about how its Memphis chapter has partnered with the local public library to run a set of "technology camps" where 12-to-15-year-olds get to play with bright, shiny gadgets — and meet IT people who talk to them about how the technology is used in businesses.

For example, that can mean using digital cameras to create webcasts, or explaining how tablet PCs can be used in hospitals.

SIM's Teen Tech Camp sessions have a limited enrollment — 12 to 18 attendees — and the kids have to write an essay and be recommended by a teacher before they're accepted. The result of that selectivity? Other kids try to sneak in. Now *that's* an attitude we want to see when it comes to IT careers.

It's a great idea, one that SIM hopes to spread to dozens of other cities.

But it may give you pause. After all . . . gadgets? Is that really what we want to tell these kids that corporate IT is about?

Actually, yes. And not just because those gadgets inspire a passion we sorely need in the next generation of IT people.

That passion matters. We all know there aren't any "safe" careers in IT, not anymore. The boring, workaday IT jobs are fodder for outsourcing. And bored IT people don't have a future, because they're not interested enough in the technology to search constantly for how it can give business users a competitive edge. Which is what a corporate IT shop is supposed to be doing.

These kids aren't bored. They're interested. They're curious. They've grown up steeped in technology, surrounded by gadgetry. Telling them that they can make a career out of looking for new ways to use these things, not as toys but as business tools — that's certain to pull in the kind of engaged, motivated young people we want for IT.

■ In the next generation of IT, a big part of our job will be helping users get competitive advantage from gadgets.

But there's more to it than that. Gadgets really *are* the future of IT's biggest value to the business.

Think about it. More and more of the technology IT has to support and manage is the gadgetry users bring in to work. And users don't just drag in the smart phones, handheld Web browsers, cameras and other gizmos for fun. They've found innovative uses for them, ways to leverage that technology to do their jobs better.

For us, that's a pain. These gadgets are hard to support, hard to secure and really hard for us to control.

They also happen to be the tech that provides users with real competitive advantage.

Sure, the IT shop's technology is important too. The code we write, the wiring we pull, the firewalls we manage and the data centers we run — they're all critical to the business.

But they're infrastructure. And they're pretty standard stuff. Our competitors have bought or built the same things. They don't give us an advantage. They just let us stay in the game.

The real advantage comes from the things our competitors don't have. And one of them is the edge users can get by using gadgets cleverly.

In the next generation of IT, a big part of our job will be to help users get that short-term competitive advantage from those gadgets.

Sure, the gadgets will be obsolete in a year or two. So will the advantage they give our users over their competition. Putting those gadgets to innovative, productive business uses fast will be critical — and that will require all the curiosity, engagement and passion we can get from the next generation of IT people.

Which brings us back to SIM's tech camps. No, gadget tech isn't all there is to the future of IT.

But if it can keep kids trying to get into IT instead of running away, it's a pretty good place to start. ■

Frank Hayes *is Computerworld's senior news columnist. Contact him at frank_hayes@computerworld.com.*

SHARP®

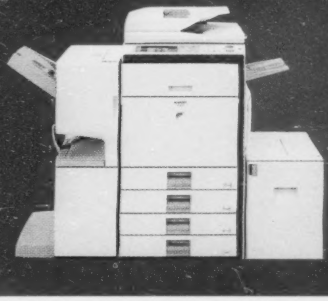
It's more than an MFP. It's a portal to seamless integration.

COPY
IMAGE SEND
DOCUMENT FILING
Exit
Username
sharposa
Password
****
OSA™
Sharp Open Systems Architecture
SHARP
HOME
SYSTEM SETTINGS
PRINT
READY
DATA
IMAGE SEND
LINE
DATA
JOB STATUS
1
2
3
C
4
5
6
7
8
9
*
0
#/P
CA
LOGOUT

The MX-Series with Sharp OSA™ technology.

The MX-Series is your portal to a world of information. Sharp OSA technology allows you to integrate and access your back end systems right from the MFP's large LCD touch screen. It even lets you customize your MFP, to maximize your IT investments by providing new integrations and usability. No wonder Sharp MFPs won the 2006 BLI "Color Copier Line of the Year" and the "IT-friendly" award. The MX-Series is more than a multifunction product, it's a multifunction portal. To learn how you can seamlessly integrate Sharp OSA technology into your network, visit sharpusa.com/documents

WORK WITHOUT LIMITS



©2007 Sharp Electronics Corporation. All Rights Reserved.

ENERGY STAR

Most Outstanding Business Color MFP Line of 2006

BERTL Outstanding Achievement

BERTL's BEST Secure MFP Range

OSA™ Sharp Open Systems Architecture

_INFRASTRUCTURE LOG

_DAY 75: These cables are everywhere!! Connecting underutilized servers to more underutilized servers. Our energy usage is out of control!!

_DAY 77: I found a way out of this mess: the super-efficient IBM BladeCenter.® It helps us manage power and cooling usage with intelligent Cool Blue™ technology. And with its new Quad-core Intel® Xeon® processor, we won't have to sacrifice performance for efficiency. So out with cables, in with blades.

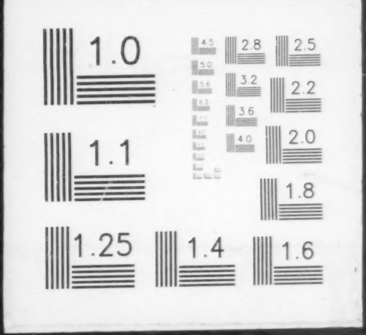
_DAY 79: Gil's stuck under the ball. Tried calling his wife. Turns out the photo of his family came with the frame.

intel®
Xeon® inside™
Quad-core.
Unmatched.

IBM®

IBM.COM/**OUTWITHCABLES**

IBM, the IBM logo, Cool Blue and BladeCenter are trademarks or registered trademarks of International Business Machines Corporation in the United States and/or other countries. Intel, Intel Inside, the Intel Inside logo and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and/or other countries. Other company, product and service names may be trademarks or service marks of others. ©2007 IBM Corporation. All rights reserved.


1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3